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Washington Highlights

Legislation approved by a Senate Judiciary Subcommittee outlaws portal-to-portal back pay claim suits, except those covered by agreements between employers and employes.

Under the terms of the bill future as well as existing claims for portal back pay would be banned. These claims now total the staggering sum of approximately $5,000,000,000.

The measure defines portal-to-portal time as covering activities occurring outside regular working hours. Accordingly, it would exclude non-productive activities such as walking to the work bench and waiting in line for pay checks.

The American Petroleum Institute, Mid-Continent Oil and Gas Association and Independent Petroleum Association of America joined in a statement on the portal pay issue. It was filed with the Judiciary Committees of both the House and Senate.

President Truman has made it known that he plans to send a message to Congress recommending a program of universal training upon completion of an inquiry being made by his committee.

Dr. Karl E. Compton, president of Massachusetts Institute of Technology, heads a commission which is engaged in a study of universal training for the Chief Executive. The commission's report is not expected to be ready before April.

Rather than an extension of the draft law, which will expire March 31, the armed services have been reported favoring Congressional action to establish some form of military training.

With the highest bid of 11 opened at public auction, Texas Eastern Transmission Corporation of Houston, Texas, has purchased from the War Assets Administration the Government-owned Big and Little Inch pipelines for $143,127,000.

The high bid is only $2,700,000 lower than the amount spent by the Government to construct the lines during the war. An emergency measure, they were designed primarily to carry oil and products from Texas to the Philadelphia-New York area.

Robert M. Littlejohn, WAA chief, explained that the sale is subject to approval by the Justice Department and the issuance of a certificate of necessity and convenience by the Federal Power Commission.

Opposition to the immediate sale of the lines came principally from sources fearful that the coal industry would suffer by use of the carriers for natural gas.

The question of a program for the maintenance of a synthetic rubber industry is the subject of study by John R. Steelman, assistant to the President.

Seeking expansion of the program, Senator O'Mahoney, Wyoming, has introduced a bill to extend the Synthetic Fuels Act of 1944 from the original period of five years to eight years. The measure also calls for an appropriation authorization increase from $30,000,000 to $60,000,000.

Interior Secretary Julius A. Krug, who recently left here for a tour of the Pacific, stopped long enough in California to visit the disputed tideland area, before flying on to Hawaii.

His comment on the Federal Government's efforts to gain control of the rich offshore lands away from the state was duly publicized in Washington.

"I wanted to see," he was quoted as saying, "something of the actual operations in order that I might have a basis for planning if the Government gets control of the tidelands.

"After all Long Beach and others did not come onto the property as poachers. I would assume that Congress will be sympathetic with the municipalities. However, the question now is who owns the tidelands, the Federal Government or the municipalities.

"California oilmen have made huge investments in leasing these properties under the impression they were state-owned. The Government, would therefore be morally obliged either to bail them out or to give them first priorities on leasing the properties from the public domain."

The Secretary plans to end his tour in Japan, where he will hold a conference with General MacArthur.

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Cementing With Plastic Resins in California Oilfields

By Orie Dale

The process of cementing oil wells until recently has depended almost exclusively on Portland cement as the cementing material. Portland cement has performed yeoman service in this work and has been developed by chemistry to perform to desired requisites of temperature, pressure, and setting time.

A need for a cementing material which possessed different properties than Portland cement has long been felt by the oil industry. Thermosetting plastic resins had many inherent properties desired in specialized phases of oilwell cementing and it was felt that these plastics could be developed to meet certain needs.

The Dow Chemical Company and its subsidiary, Dowell Incorporated, have developed special plastics to set at temperatures usually encountered in oil wells. These plastics have been used throughout the Mid-Continent for several years past to successfully solve many difficult cementing problems at a great saving to the operators there.

Since the introduction of plastic plugging service in the State of California, a wide field of possibilities in remedial and repair work have been opened to the oil operator. Plastics are recommended for certain types of jobs where Portland cement is inadequate and for other types of jobs where, due to the special properties of the plastics, they are superior to Portland cement.

Certain types of thermosetting plastics developed specifically to be used in plugging off unwanted fluids in oil wells have been applied to a number of representative types of problems in California and many successful jobs have proven their value.

The plastic is a liquid which has the property of changing to a solid through polymerization caused by the influence of heat. Catalysts are employed to increase the rate of

The Author

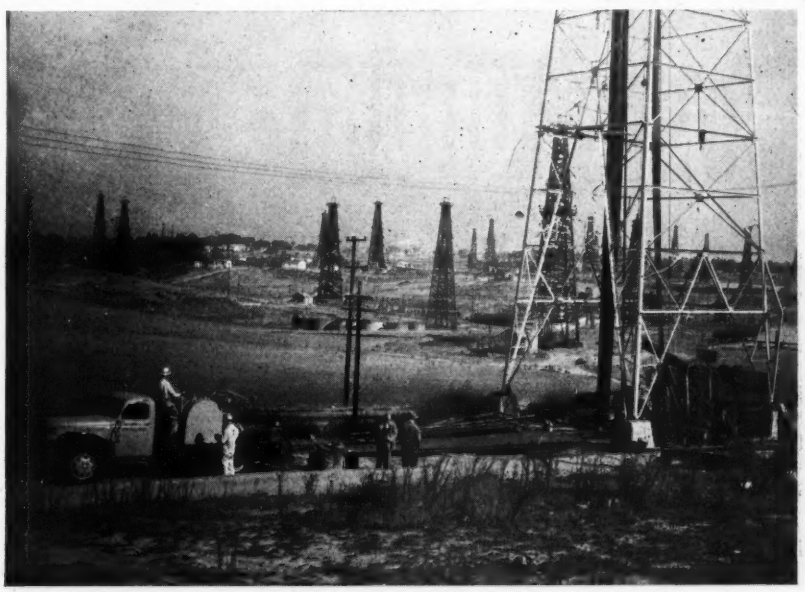
polymerization when a faster setting time is desired than would normally occur due to a given well temperature. The higher a given well temperature, the faster a particular plastic changes to a solid, and conversely, at a lower hole temperature, the hardening process will be slower. At the present time three particular plastics are available to embrace a heat range of 70° F. to 300° F. The setting times will vary from one-half an hour to sixteen hours, and the setting times may be varied within certain limits by the use of catalysts.

The plastics are true homogeneous fluids not readily miscible with brines or oils in the well, and they are chemically inert. These latter fluids, therefore, do not affect the hardness, strength or bonding qualities of the plastics.

The plastic is easily driven into sands or fissures in squeeze work and does not tend to form a filter cake at the sand interface as does Portland cement which is composed of suspended solids.

The plastic has good bonding properties, and sets to a dense solid which is completely impermeable to the flow of liquids or gases. It has a tensile strength which is ample for most requirements of plugging.

The plastics have a specific gravity near 1.2 at 60° F. and a viscosity comparable to that of S.A.E. No. 30 motor oil.



The simplicity of equipment necessary for repair work by means of the bailer unit is obvious from this scene.

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The solidified plastic is readily drilled with a chisel bottomed bailer or portable rotary with tubing. The drilled plastic is inert and has no effect on drilling fluids.

Water base colloidal drilling muds have a bad effect on the plastics. The plastics do not penetrate nor bond to mud filter cake. Plastics can be set in the presence of rotary mud, but difficulties are presented which require special precautions.

As the oil operator becomes acquainted with the physical properties and characteristics of these plastics, he can visualize a wide range of application to his manifold problems. Indeed, he now possesses a new tool with which to work.

Three major phases of the plastic operation are: Location of water entry, preparation of the well, and application of the plastic.

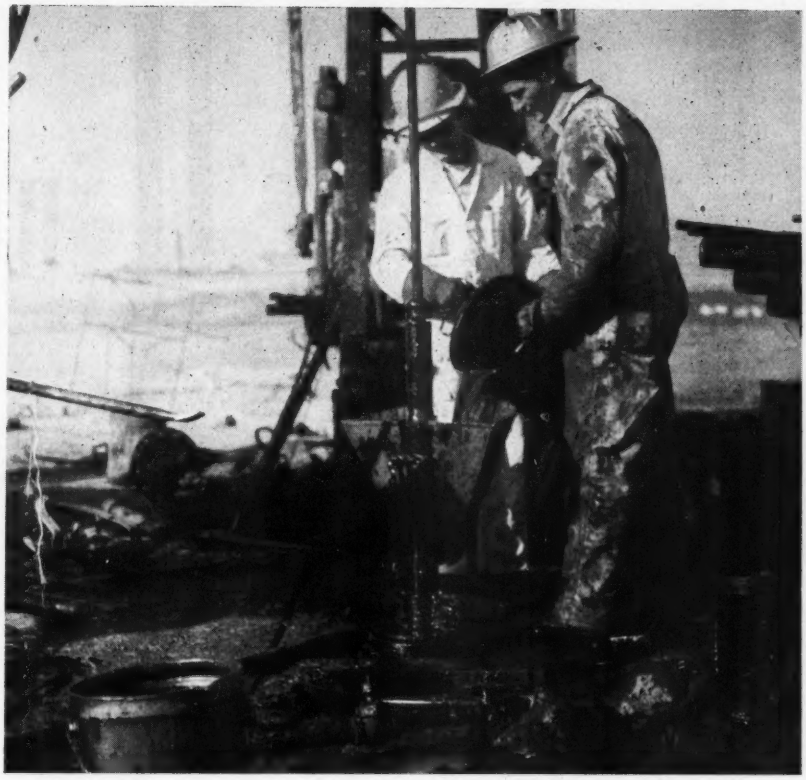
Location of Water Entry

It is important to locate the source of water entry and apply the plastic there, because the plastic will set up in a productive sand if applied there.

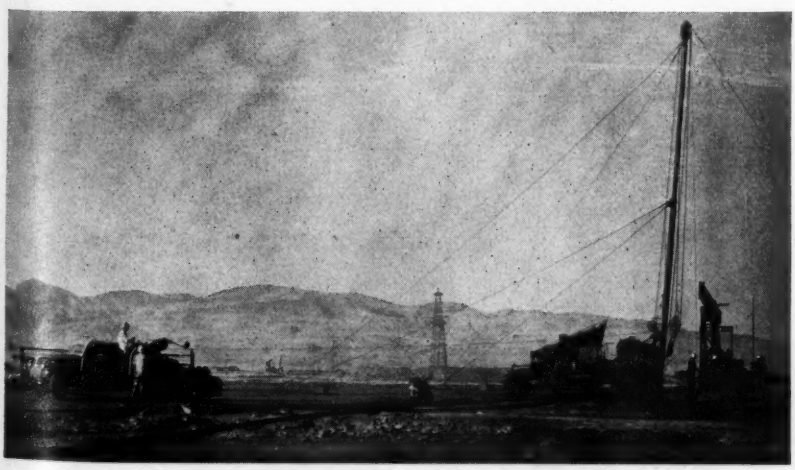
The operator has varied means at hand to use in determining the source of water and entry:

A. "Water witch," or electric water-locating devices.
B. Correlation or relation to other wells.
C. Electric logging.
D. Permeability index. The most permeable portion of a zone can give up the oil first and may therefore be suspected of going to water if oil is water driven. This seems to have become general thinking among operators.

It is obvious that if the plastic is not applied to the source of water entry, a water shut-off will not be obtained and that successful exclusion will depend on the factor of correct location of water source.



The dump bailer or wire line pump is being filled preparatory to making a run into the well.



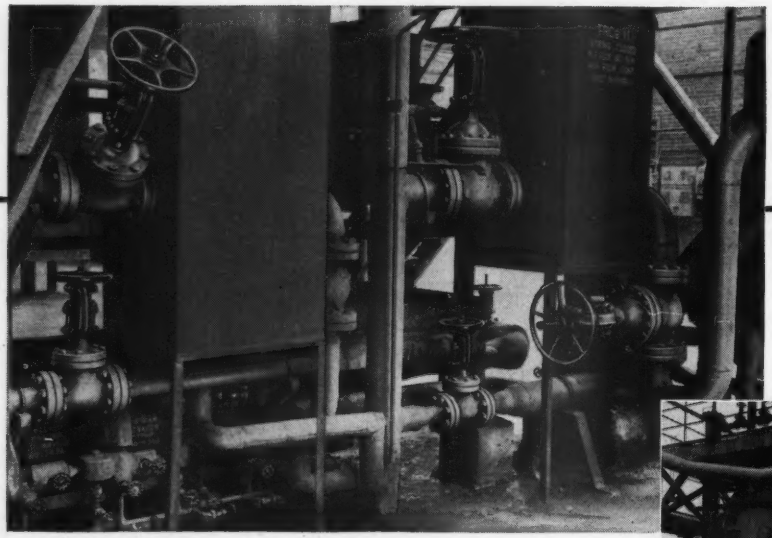
Most operations can be performed with the use of well pulling equipment which is commonly used on wells of a particular depth. This factor of economy is important to the oil operator.

Preparation of the Well

In preparing to apply the plastic, if the well was originally completed with mud, steps must be taken (1) to clean mud from the area to be plugged; and (2) to remove adjacent mud which could migrate to contaminate and spoil the job. When preparing to plug through a perforated liner, the liner must be cleaned inside, the perforations opened or the liner reperforated, and then steps taken to clean the annulus and the interface where plastic bond is intended.

In some instances the producing zone might be thin and the well may have been produced at a rate high enough to clean itself. These instances are indeed rare in California oil fields, and in most cases additional means must be applied to clean the well, if it had been drilled in with mud.

Certain completion practices make for more nearly ideal conditions in which to apply the plastic when remedial work is indicated at some future time:



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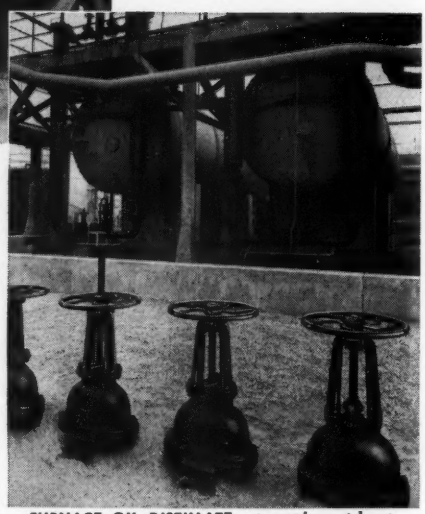

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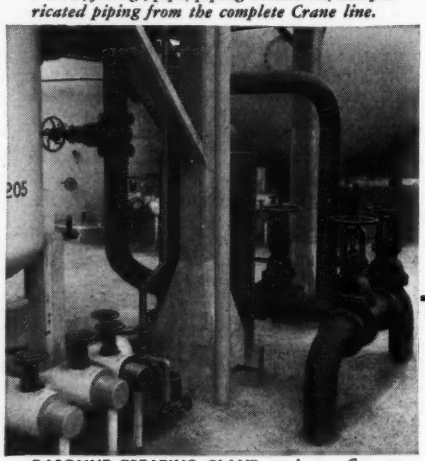

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A. Drill in with cable tools
B. Drill in with oil
C. Drill in with oil base mud
D. Wash with a circulation washer using water, preferably salt water.
E. Acidize to remove mud and mud filter cake
F. Impermex or starch mud may be used and may be disintegrated by introducing bacteria or acid.

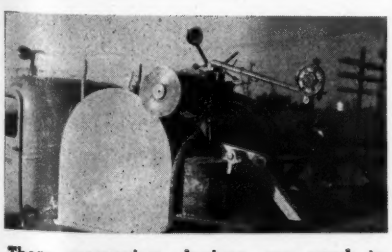
The wise operator with an eye to the future can adopt a completion practice which will enable him to utilize advantages to be gained by the use of plastic when future need may arise. That the need will one day arise in many of his wells is just as sure as death and taxes. Various means may be employed to clean the well in preparation for the plastic application:

A. Bailer
B. Hydrostatic bailer
C. Hydrostatic bailer with perforation washer.
D. Push-out type washer
E. Suction washer
F. Circulation washer
G. Chemicals
H. Mechanical perforation opener

If chemicals are used in the process of cleaning, they must be neutralized or removed by bailer or pump in order not to affect the setting of the plastic.

The cleaning of the well in preparation for plastic operation is at times a difficult and bothersome problem, but proper preparation is vital to the success of the operation. Too many times this has been learned at the expense of bad jobs.

Bad jobs are more costly than the few additional dollars which might be spent in adequate preparation to obtain a good job.



These measuring devices are used to measure accurately line runs in bailer placement operations.

This view of a plastic operation was taken at Long Beach Harbor.

The well fluids should be at equilibrum in order that the plastic may not be carried away with a fluid that is migrating within the well.

Application of the Plastic

The methods of applying the plastic to the well commonly in use are:

A. Placement by means of a positive displacement dump bailer on a wire line.
B. By pumping and displacing through tubing.

The positive displacement bailer is run in on a sandline from a hoisting unit built for that specific purpose and furnished by the service company.

The positive displacement bailer is dumped by setting it on bottom. The valve in the bottom of the bailer remains open as long as the weight of the bailer is on bottom. The fluid is displaced from the bailer by means of a piston which is attached to a heavy rod of sufficient length to displace all the fluid from the bailer.

If the sand or zone to be plugged is off bottom a new bottom is established on which to dump the bailer by bridging back with sand and/or gravel, or by means of a bridging plug set in the liner or casing. A plastic seal can be placed upon the bridge to prevent migration of other plastic downward. This plastic cap is composed of normal plastic and a large amount of filler.

When plastic is to be used for the purpose of sealing, fillers are mixed with the plastic. These fillers form a filter cake at the sand interface or in small fissures, which is impermeable to the flow of the liquid plastic.

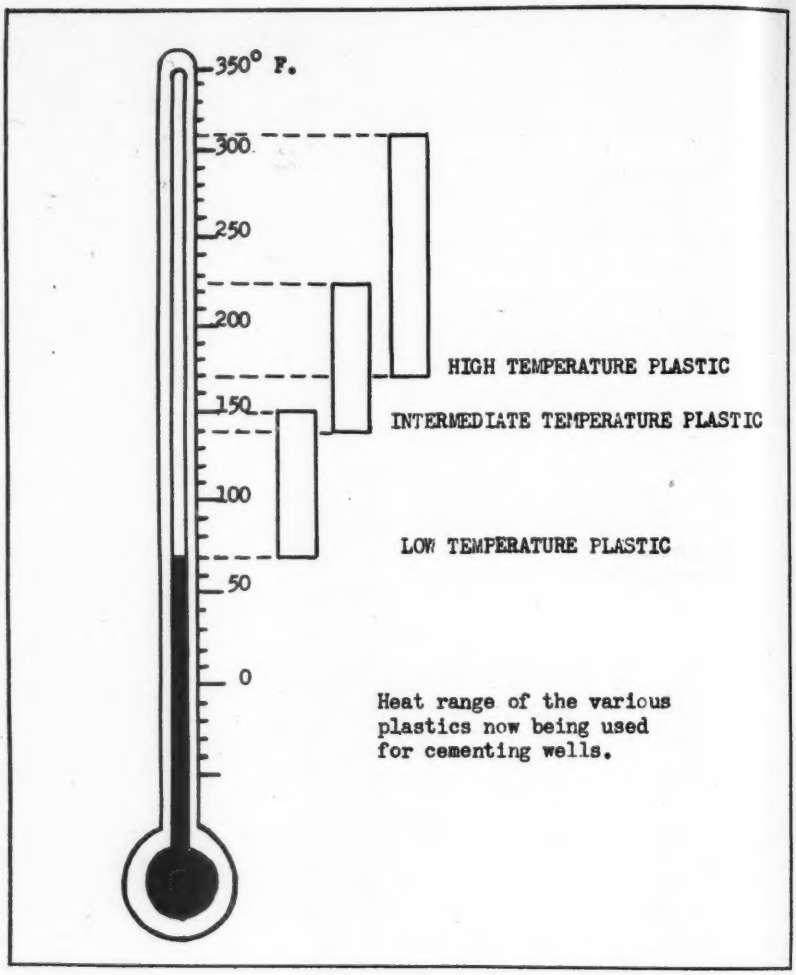
Fillers

Admixtures of plastic and filler may be proportioned to allow controlled penetration of the plastics into sands of given permeability.

The mechanical action of these fillers in forming a filter cake is similar to the action of drilling fluids which form a filter cake. This is important in plugging through a productive zone if it is intended to drill out the plastic at some future date in order to produce the zone by re-perforating.

If a liner is to be set-through a productive zone and cemented with plastic to be selectively gun perforated for production, fillers would be employed to keep the plastic from permeating the sands beyond the distance penetrated by the gun perforator bullet, and to prevent possible loss of all the plastic into a sand of high permeability.

Fillers are essential if plastic is to be used in squeeze work. The fluidity of the plastic allows it to be forced into sands of low permeability at comparatively low drive pressures. The fillers will prevent the plastic from all going out at the point of highest permeability by filtering out at the sand interface to form a barrier which is impermeable to the flow of the plastic. The plastic which flows into the formation while this filter barrier is being formed will, of course, set up, and this amount will determine the amount of penetration. It is, therefore, obvious that the percentage of filler mixed with the plastic will control the depth of penetration.



Heat range of the various plastics now being used for cementing wells.

Bailer Jobs

Bailer placement jobs may be divided into four general classes with variations within each class:

A. Bottom plugs in perforated casing or liner, or in open hole.
B. Selective plugging of a zone off bottom, by bridging back with sand or a bridge plug to create a new bottom on which to dump the bailer.
C. Repair of split casing or other casing leaks and to repair perforated liners which have enlarged perforations.
D. Packer sealing or sealing of any type of bridge.

A bridge plug is needed at times to plug the liner or casing at a distance from the bottom. Several types of these tools are available.

It is expedient sometimes to use sand and/or gravel in conjunction with the bridging. A special bailer is furnished as part of the bailer unit to place sand or gravel when it is desired to employ sand or gravel for this purpose.

It is an advantage to be able to utilize the bailer method in remedial work because it is not necessary to move in heavy expensive equipment.

Placing of Plastic Through Tubing

The placing of plastic through tubing by the pump method presents new problems of handling because small volumes are the rule and because it is desirable to keep the plastic from becoming contaminated by the fluids which are used as a circulating medium in the well. These problems have been solved by the development of new tools and methods which facilitate the proper placement of the plastic, without loss or contamination. Solid rubber plugs are used as a barrier between the plastic and the displacing medium. These plugs are designed with multiple wiping lips which wipe the tubing as the plug travels through the tubing, thus, enabling the plastic to be pumped without loss or contamination.

When plastic is to be pumped through special tools such as cement retainers or other specialized equipment, a tool to catch the rubber plugs is placed immediately above these tools; therefore, no changes in existing tools are necessary to accommodate the rubber plugs.

If it is desired to obtain an indication that the plug has arrived at the bottom of the tubing, a restriction is placed on the bottom of the tubing. When the solid rubber plug arrives at this restriction, additional pressure above normal circulation pressure must be exerted in order to force the plug through the restriction and the additional gauge pressure will indicate that the rubber

(Continued on Page 15)

Possibilities and Problems of Drilling Beyond the Continental Shelves

ABSTRACT

A plausible method of drilling beyond the continental shelves is set forth with limitations of the method. The continental shelves comprise the water-covered portions of land masses out to 600 ft. of water, or 100 fathoms. The problems and possibilities of drilling beyond this depth are discussed in this paper.

INTRODUCTION

Much attention is being given the problem of developing petroleum beneath the open sea. Geophysical surveys have been made 26 miles offshore[1] from the continental United States, and once offshore ownership is established it is likely that there will be drilling for oil on the continental shelves.

More than two years ago the author presented the means for drilling in deep water[2] at the fall meeting of the Petroleum Division of the AIME at Los Angeles. His concepts then were based on the use of rigid foundations suitable for drilling in water up to 600 ft. deep. The present paper suggests a method for drilling in deeper water.

POSSIBILITIES AND PROBLEMS OF DRILLING BEYOND THE CONTINENTAL SHELVES

It being conceded that because restricted deep-water portions of the hydrosphere might contain oil in commercial quantities, and that at any rate it is pertinent to know more of the nature of the lithosphere beneath the hydrosphere, the possibilities and problems of drilling beyond the continental shelves should be set forth.

Drilling in open water would offer few if any advantages over drilling on land. These are:

1. The ocean transportation is available to deep-water drilling sites, and extensive pipe lines and roads are unnecessary.

2. Refinery facilities and markets perhaps are established on the nearby shore where adjacent fields on land are nearing depletion.

By Henry Emmett Gross,
Consulting Engineer, St. Louis, Mo.

3. There is freedom from jungle pests and tropical diseases.

4. Competitive drilling is less likely.

5. Extensive areas attractive for development are not yet under lease or concession.

Disadvantages are great and numerous:

1. Storm hazards from wind and wave.

2. Expensive foundations, either rigid or floating.

3. Shutdown times because of weather.

4. Marine Regulations of Federal Bureaus in addition to customary regulations on land.

5. Frequent difficulty in moving men and materials to and from drilling platforms.

6. Extra precautions required in open sea.

For drilling in water more than 500 or 600 ft. deep, rigid foundations[2] become too costly, and floating foundations must be used, and they must meet the following requirements:

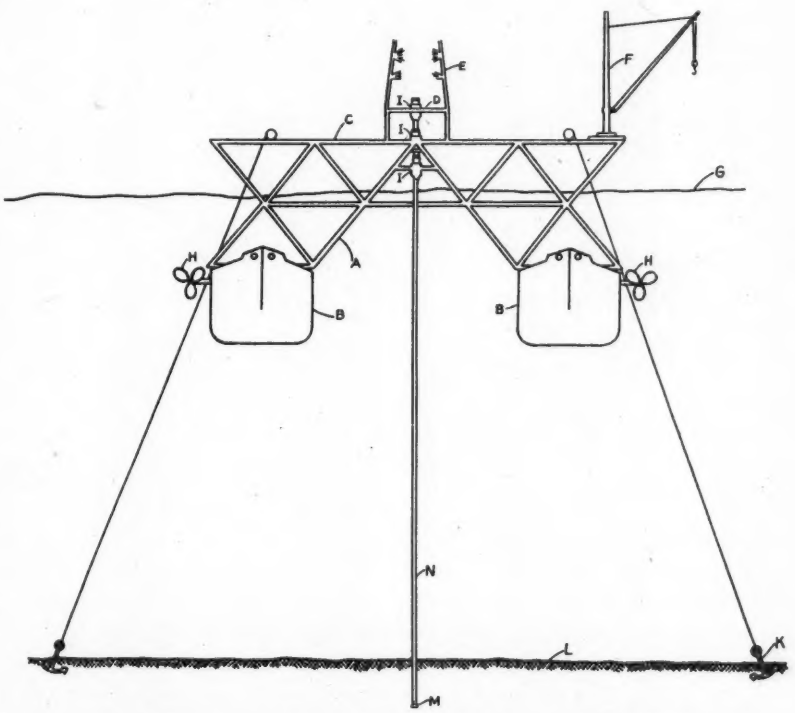


Fig. 1.—Marine Foundation For Use In Water Deeper Than 600 Feet.

A. Open-type substructure.
B. Hull.
C. Drilling platform.
D. Derrick floor.
E. Derrick.
F. Crane.
G. Sea Level.
H. Propellers.
H'. Propellers for torque.
I. Hydraulic rotary tables.
J. Anchor line.
K. Anchor.
L. Sea floor.
M. Drilling bit.
N. Drill pipe.
O. Intermediate string.
P. Conductor pipe.
Q. Diaphragm to actuate valve.
R. Tubing to carry diaphragm liquid.
S. Mechanism by which diaphragm fluid actuates rod T to open and close valve U.
V. Diaphragm to start and stop motors driving propellers H.
W. Tubing to carry diaphragm liquid for controlling motors driving propellers.
X. Anchor hoist.

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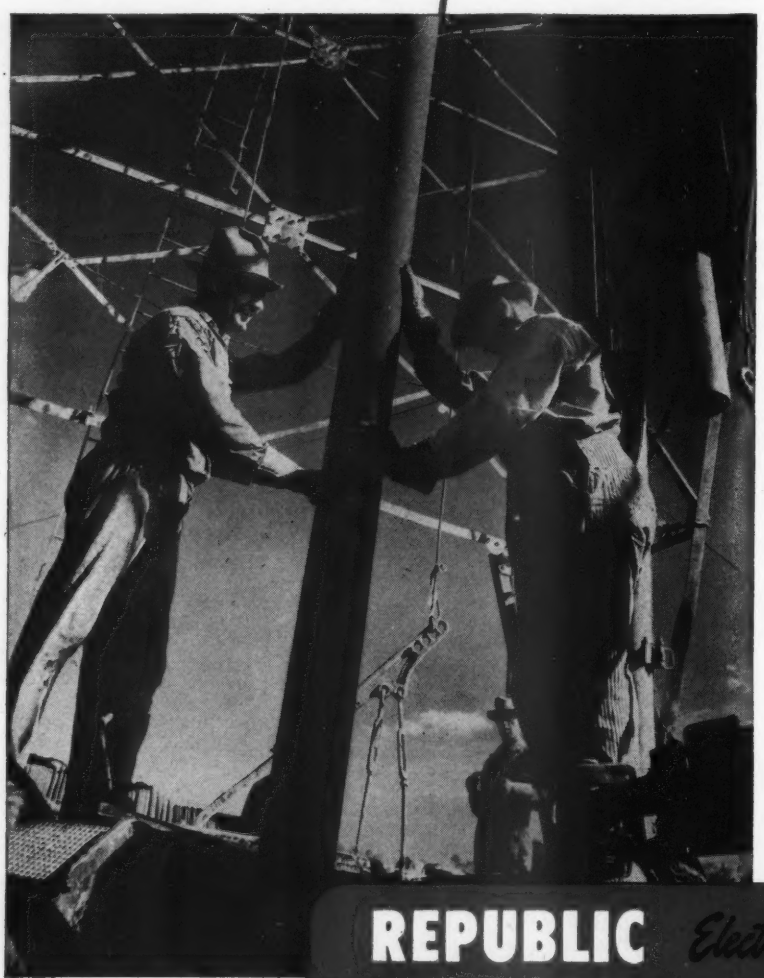

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1. The derrick floor and well head must be in the open air, as on land.

2. The conductor pipe, casing and drill pipe when in use must be under constant tension and not undulating with the waves.

3. The derrick floor and drilling platform must maintain a constant level even when loading or unloading material, or landing casing or drill pipe on the bottom of the well, or when injecting into or removing quantities of liquids from the well; and must not rise and fall with the waves.

4. The foundation must be of the open type in the part of the structure that is subject to action of wind and wave.

5. The drilling platform must remain in a fixed position at all times, and must have means provided for overcoming torsion imposed by the drilling operation.

6. The foundation must handle all the loads amply for the drilling of the well or wells if several wells are drilled from one location, and must provide ample storage space for rotary mud, and space for fresh water and crude oil to cover the needs of several days, at all times.

7. It is understood that under all circumstances metacenter conditions must be such that the floating foundation cannot overturn.

8. Anchors must not drag.

THE FOUNDATION

A foundation meeting these requirements is set forth in Fig. 1. Item A is an open substructure supported on hulls B, which are sealed on the decks and are submerged sufficiently to escape wave action in storms. Drilling platform C is sufficiently above sea level to be safely above any storm waves, 40 to 50 ft. Referring to the more detailed illustration of Fig. 2, hull B may be entered through manway Y. To keep the drilling platform at constant level, diaphragm Q causes water to be admitted to storage in the hull if it and the drilling platform tend to rise, and to discharge water if sinking, the pumping mechanism being in the hull. To maintain the drilling platform in a level plane a minimum of four points must have diaphragm-controlled ballast stations, one being fore and aft in each

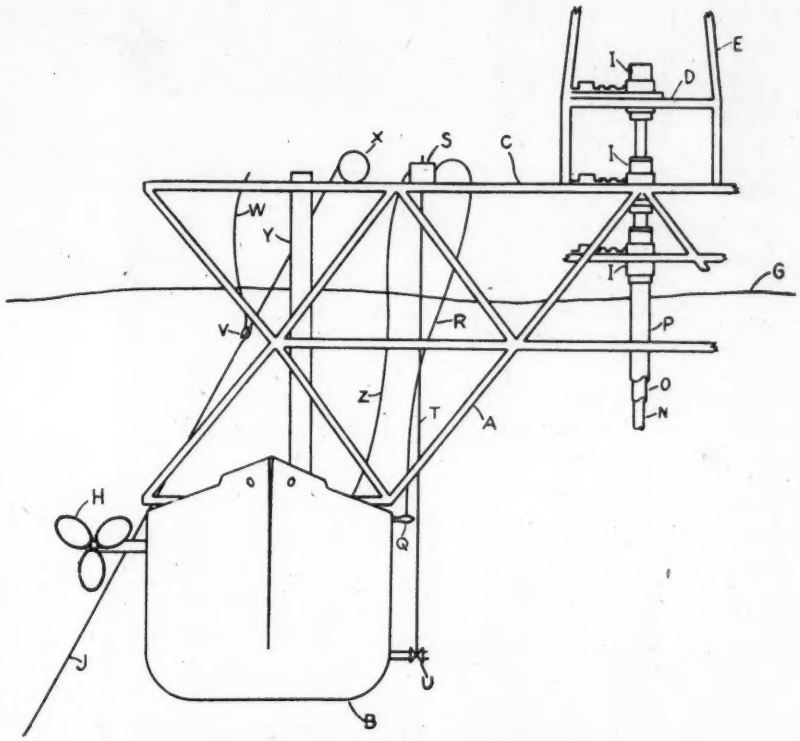


Fig. 2.—Front View Marine Foundation. For legend see Figure 1.

hull to maintain an even keel* throughout. Probably it would be better to have duplicate stations at each point, for surety. Although items Q, R, S, T, and U are shown as external, in practice they would be contained neatly within the hull, together with the pumping mechanism, and the diaphragm element functioning for Q would be in a vertical cylinder or tube passing well above sea level and having small openings below sea level, so as to tend to cut down the effect of undulations of the waves.

Although theoretically the drilling platform would have no up and down movement, actually there probably would be a little. This would be undesirable for the casing strings O and P or drill pipe N. To keep these strings of pipe under constant tension, hydraulic rotary tables I, held under constant hydraulic pressure, should be provided.

The conductor pipe would be worked as far into the sea floor as possible, assisted by underdigging with retractable rotary bits.

To cut down anchor-cable tension from wind blowing against the foundation and equipment exposed above the water, a cable diaphragm V similar to those used with weight indicators is secured to cable J and tube W carries fluid to the control mechanism that operates reversible motors that drive propellers H in such manner as to relieve tension in the anchor cables.

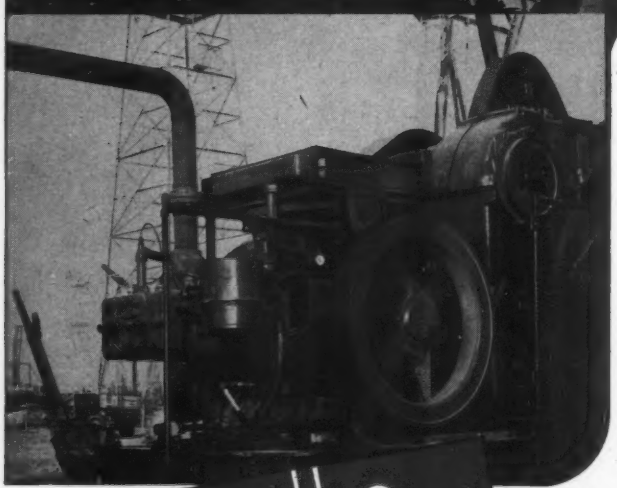
Fig. 3 is a plan view of the floating drilling platform. When the rotary table is rotating, any torque action thereon should be met instantaneously with an equal and opposite torque applied through propellers H′ provided for that purpose.

Manway Y, the means of entry to hull B, should be of as small a tube as conveniently would permit men to climb up or down the ladderway and a safety hatch should be provided beneath it. It would be best to have a manway fore and aft on each hull. Small-diameter manways offer less resistance to storm waves, which when cusping hit with terrific impact.[3]

Pipe for carrying electric lines, or oil, mud, or fresh-water lines into the hull, should be spaced apart and enter the hull separately, so as to offer less resistance to waves. The hulls should be large enough not

Performance Proves ... Service Sells

LUFKIN COOPER-BESSEMER ENGINES



Years of reliable and trouble-free service have proved the performance stability of LUFKIN COOPER-BESSEMER Engines . . . for any pumping job. Equally important to an operating company is the LUFKIN service that stands behind every installation. LUFKIN sales engineers are anxious to work with you in selecting the proper LUFKIN COOPER-BESSEMER engine for your particular requirements and in addition they are constantly on call for any service needs. It all adds up to satisfaction and that has been and always will be the best way we know of to assure value received for our customers.

See COOPER-BESSEMER installations at:

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- **Signal Hill**
- **Los Angeles Harbor (U 237)**
- **Wasco**
- **Santa Fe Springs**
- **Santa Maria**

A heavy duty medium speed engine, designed for minimum **MAINTENANCE, COMPACTNESS, ACCESSIBILITY,** and **EASE of INSTALLATION,** to meet oil field power requirements.

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LUFKIN FOUNDRY & MACHINE CO.

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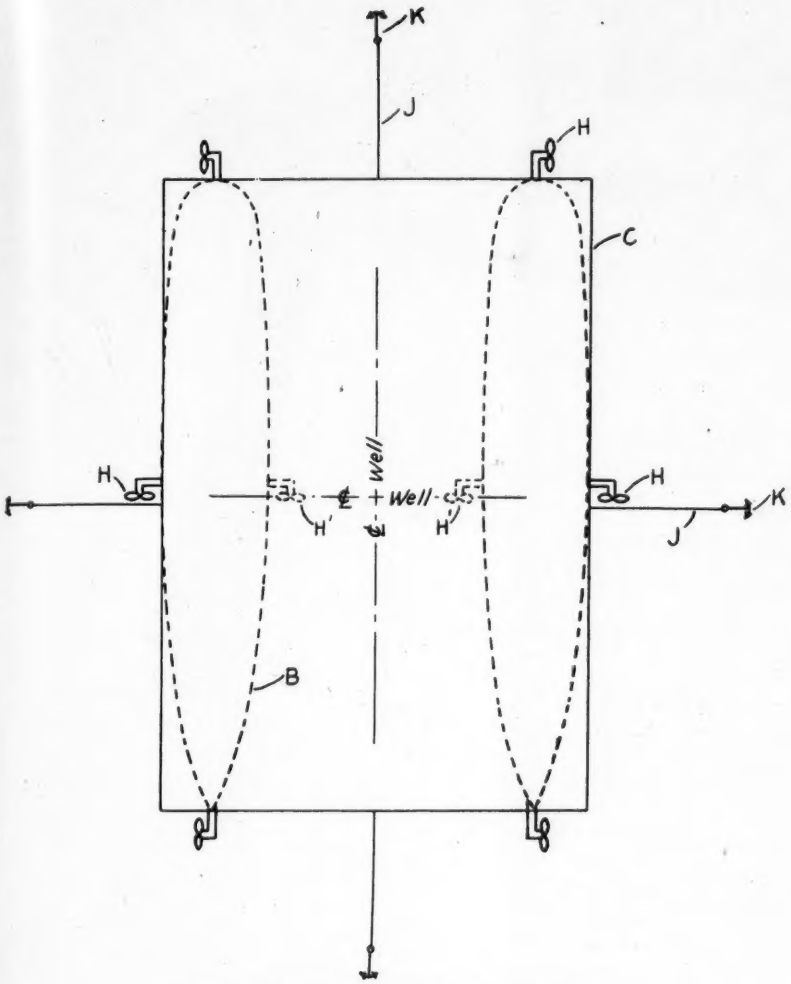


Fig. 3.—Plan View, Floating Drilling Platform. For legend, see Figure 1.

only to provide ballast chambers of size sufficient to allow several hundred tons variation of load but ample storage tanks for oil, mud or fresh water.

For ease of illustration, hulls of the shape shown were depicted, but it is understood that other forms might be more advantageous; for example, a cigar-shaped hull, or even spheres, the latter offering the same resistance in all directions.

ANCHORAGE BY RIGID MEMBERS IN TENSION

A foundation using cables and diaphragm mechanisms has been set forth. Such an ocean drilling platform using a minimum of vertical members exposed to wave would require 1000 hp. for stabilization in big ocean storm waves. If an attractive oil or gas reservoir should be encountered—for example, in Santa Barbara Channel, California—the means described might be replaced by tension members of 8⅝-in. buoyant drill pipe. The drill pipe would replace anchorage cables and would be anchored either deeply beneath the sea floor or on the sea floor by a suitably applied load.

Fig. 4 presents such an anchorage below the sea floor. The floating foundation would be fixed in place as set forth previously and as illustrated in Figs. 1 and 2. Hydraulic rotary equipment, designated I on Fig. 4, would be set at the proper place on the drilling platform, and a conductor pipe 1 would be landed at a suitable angle on the sea floor, and worked as far therein as possible with retractable bits. A releasing joint should be provided above but as near the sea floor as possible. With the conductor pipe in place, suitable hole could be made for anchorage. Since the sea water at the bottom of the deep sea is cold, approaching 0°C., the rock temperature at anchorage depth should be low, and after the anchorage hole is made a column of slow-setting cement could be spotted at the bottom thereof through the drill pipe. A string of 8⅝-in. buoyant pipe could be run and worked into the fluid cement and allowed to set. The conductor pipe could be parted at the releasing joint and recovered by the tedious process of stripping.

A plurality of such pipe anchor-

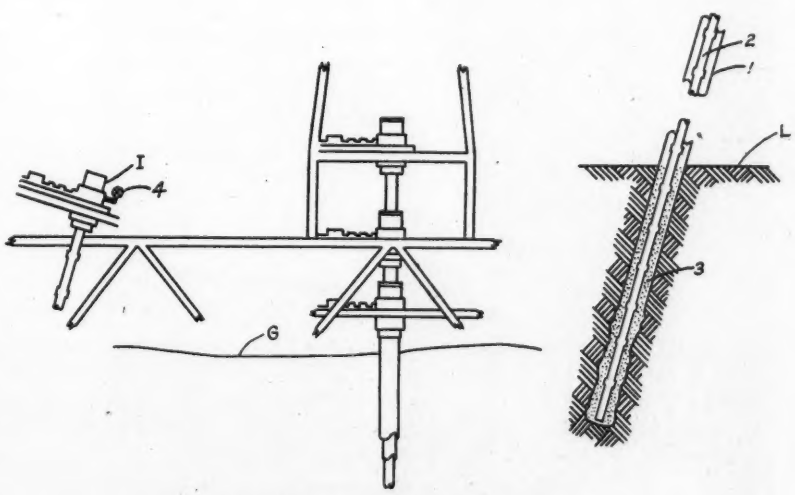
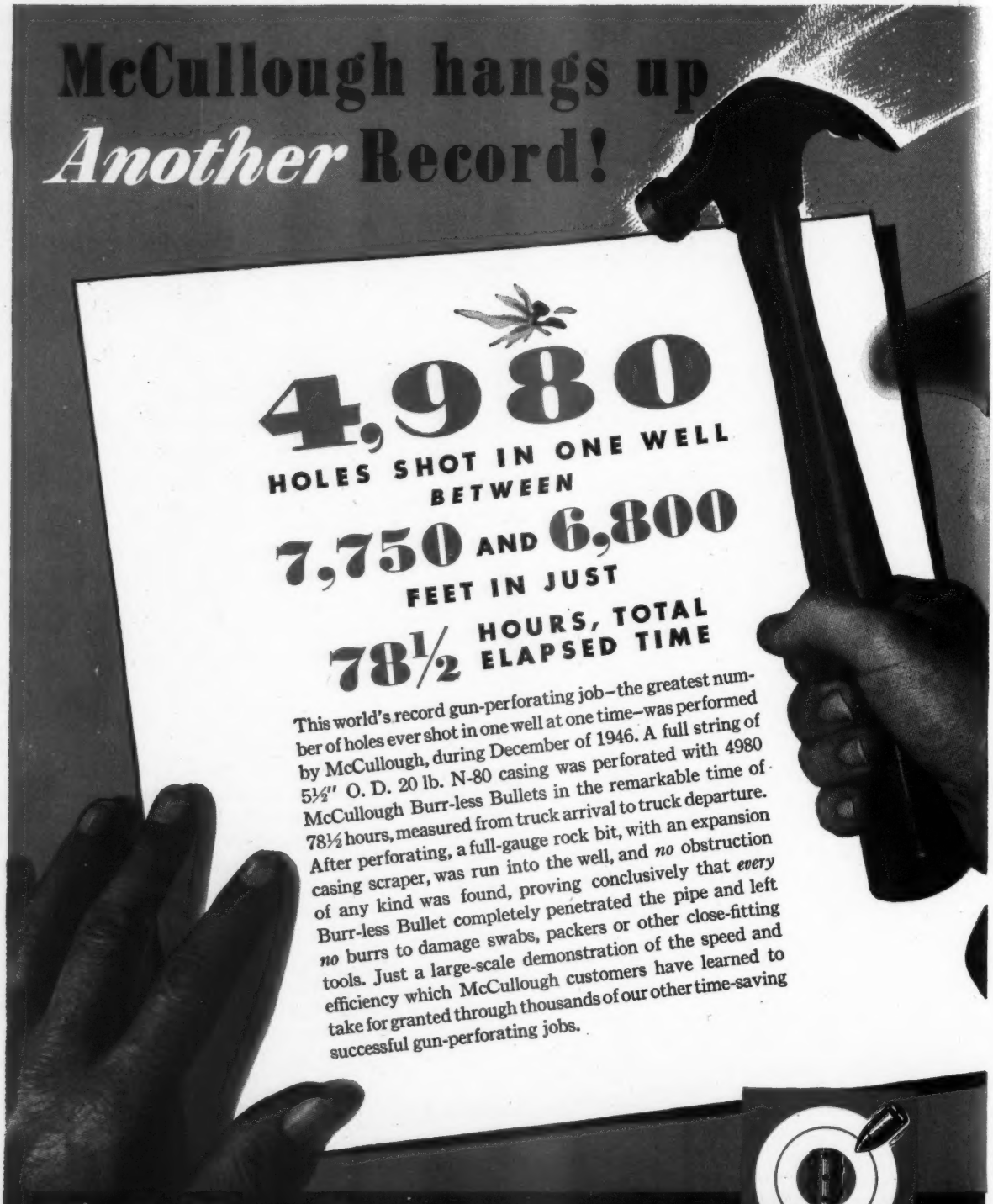


Fig. 4.—Pipe Anchorage Below The Sea Floor.
1. **Conductor pipe for anchorage.**
2. **Buoyant anchorage pipe.**
3. **Anchorage hole.**
4. **Gauge.**

McCullough hangs up *Another* Record!



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7,750 AND 6,800

FEET IN JUST

78½ HOURS, TOTAL ELAPSED TIME

This world's record gun-perforating job—the greatest number of holes ever shot in one well at one time—was performed by McCullough, during December of 1946. A full string of 5½" O. D. 20 lb. N-80 casing was perforated with 4980 McCullough Burr-less Bullets in the remarkable time of 78½ hours, measured from truck arrival to truck departure. After perforating, a full-gauge rock bit, with an expansion casing scraper, was run into the well, and *no* obstruction of any kind was found, proving conclusively that *every* Burr-less Bullet completely penetrated the pipe and left *no* burrs to damage swabs, packers or other close-fitting tools. Just a large-scale demonstration of the speed and efficiency which McCullough customers have learned to take for granted through thousands of our other time-saving successful gun-perforating jobs.

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CALIFORNIA: LOS ANGELES, AVENAL, BAKERSFIELD, SACRAMENTO, VENTURA — WYOMING: CASPER
LOUISIANA: HOUMA, LAKE CHARLES, NEW IBERIA, SHREVEPORT — KANSAS: ULYSSES

ages could be placed in pattern around the platform. Pipe buoyancy may be provided either by having each joint an individually sealed chamber or by bailing the pipe until empty. The sealed-chamber method could be used, having the pressure in each joint equal to the hydrostatic pressure at the depth at which the joint would be used.

Hydraulic rotary tables or chucks would hold the pipe at its upper end and a pressure gauge used with the chuck would show the tension at all times. A pressure element in conjunction with each hydraulic chuck could be used to relieve some of the pipe tension by use of power, as described in the earlier discussion on the anchor cable. Buoyant 8⅝-in. pipes would have a maximum capacity of 800,000 lb., i.e., a safe capacity of 400,000 lb. Pipe joints should screw together but be made so that they cannot unscrew automatically.

A modification of the floating drilling platform set forth in Figs. 1 and 2, but having wide flat-bottomed hulls, might be lowered onto the sea floor by use of even-keel principles discussed previously, with the top of the hull at least 30 or 40 ft. below sea level, so as to be free from effects of storm waves. For the same reason the drilling platform should be about 40 ft. above sea level.

PROTECTIVE MEASURES

The rapid improvement of helicopters, meteorology, radio, radar, and landing craft will add greatly to the safety of crews working with open-water drilling and producing equipment.

Anchor cables should be treated in the factory with a highly effective monomolecular layer anticorrosive and the upper portion, from a few hundred feet under water to the reel, should be sheathed in the same way as electric logging cables. Diaphragms and delicate working mechanisms should be made of noncorrosive materials.

There is no apparent means of protecting the floating foundation from the tsunami or diastrophic tidal waves.

Conclusion

It must be conceded that probably there are oil deposits under water one mile or more deep and that these might contribute valuable petroleum supplies where production is waning.

What appears to be a logical approach to drilling beyond the continental shelves has been set forth, but it must be emphasized that concerted and widespread thought may reveal better means.

Even though drilling in such deep water may not open commercially exploitable petroleum deposits, it is pertinent to the welfare of the nation that everything possible be learned of the nature of the lithosphere beneath the deep hydrosphere, so that if it is found to be one vast desert, devoid of resources for man, the latter must cease to be prodigal with the resources at hand.

*The even-keel submarine, long a highly successful war machine, was invented by an American, Simon Lake, a half century ago, and during World War II he advocated large cargo submarines.

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3. H. E. Gross: Foundations for Aquatic Oil Wells, 28-34. A Thesis for Engineer of Mines Degree, Missouri School of Mines and Metallurgy, Rolla, Missouri, 1934.

Signal Oil & Gas Company Celebrates 25th Anniversary

Over 200 employees of the Signal Oil & Gas Company gathered for dinner Monday night, February 17, at the Biltmore Hotel to celebrate the Company's 25th Anniversary and receive Service Pins presented to them in recognition of 10 years or more of loyal service to Signal.

Following the Los Angeles meeting other employee gatherings were held in San Francisco and Portland where additional Signal old-timers joined with members of the Board of Directors in commemorating the Company's 25th Anniversary.

Organized in 1922 by Samuel B. Mosher, President of the Company, Signal Oil and Gas Company was one of the pioneer producers of natural gasoline in California.

Under the same management since its inception Signal has grown through 25 years of progress from a small producer of natural gasoline to become one of the outstanding independent oil producers and marketers of refined products on the Pacific Coast with branch offices and distributing plants in seven Western States.

Cementing with Plastic Resins in California Oilfields

(Continued from Page 7)

plug has arrived at that point.

Jobs of many representative types have been successfully accomplished by both the bailer and tubing method of placement.

Conclusions

The thermosetting plastic resins which are designed specifically for use in solution of cementing problems in oil wells can be utilized to the economical advantage of the oil operator because:

A. Fluidity of the material allows it to enter sands or run through perforations in pipe. Squeeze pressures are comparatively low.

B. The material is not affected by oil, oil-base mud, water or brines.

C. The material has good bonding próperties and strength, but because it enters sands to form an impervious solid of the sand, a plugging job does not depend on bonding alone.

D. Faster setting time affects a considerable saving in rig and crew time when it is desired, control setting time up to 12 or more hours can be used.

E. Accuracy of special techniques developed in placement of the material make it possible to do a repair job with a minimum of zone loss; therefore the productivity of the well is not likely to be adversely affected.

F. And finally because the plastic resins can be applied and drill with inexpensive types of well equipment.

REED *Super Shrink-Grip* TOOL JOINTS

Applied or Replaced BY HAND . . . Anywhere!

NO GAUGING REQUIRED

More wells per string with greater safety can be had when your drilling string is equipped with Reed Super Shrink-Grip Tool Joints.

The Shrink-Grip "Safety Area" seals the last engaged thread against leakage and supports the drill pipe against failure at this point of stress concentration.

The fixed landing shoulder assures proper and easy make-up and also effects a seal. The threads are, therefore, sealed at both ends.

Uniformity of manufacture assures accurate alignment and interchangeability. Get those "extra wells per string" now by equipping your next string of drill pipe with Reed Super Shrink-Grip Tool Joints.

Reed ROLLER BIT COMPANY

HOUSTON 1, TEXAS, U. S. A.

With Drilling Contractors

Several more large oil companies are understood contemplating the contracting of all wells drilled in California.

This idea has been spreading ever since Union Oil Co. announced some months ago that in the future contractors would drill all wells for the company in the state.

Signs point to a growing importance of the contract drilling branch of the oil industry. It is freely predicted that in another year more than 80 per cent of the wells going down in California will be on a contract basis.

Tom Pike and his expert drilling organization are in charge of a number of interesting projects in various state areas.

In the Inglewood area, Pike is drilling Federal Oil Co.'s Culver City No. 1 and has the contract on Basin Oil Co.'s City of Inglewood No. 1.

The drilling organization in the Castaic area is guiding Standard Oil Co.'s Boobier No. 1, and Universal Consolidated Oil Co.'s Devils Canyon wildcat. Work is about to start on C. G. Willis, Butler Community No. 1 at East Los Angeles.

Pike is rigging derrick for E. A. Parkford, McKittrick No. 1 in the McKittrick area. A big gas rig and a Diesel rig are aimed toward the Stevens zone for the Navy at Elk Hills.

Coast Exploration Co., Los Angeles, has been organized to consolidate and operate the holdings of C. J. Gibson, Gibson Drilling Co. and Gibson Oil Co. The new company takes over all production and drilling operations.

C. J. Gibson is president, Frank C. Barton, secretary-treasurer, H. Rex Collins, drilling superintendent, and Albert Sullivan, superintendent at Maricopa.

The machine and pipe shops, tools and equipment of Union Oil Co. at Santa Fe Springs have been leased by the Hearn Co. Officers are widely known in contract drilling circles.

President is D. L. Hearn. Sabin V. Gray is vice president and engineer, R. M. Hearn, vice president and treasurer, and Roger D. Hearn, secretary.

Considerable interest is displayed in reports from Madrid disclosing that the Cia. Espanola de Petroleos Scientificas Investigaciones S. A. is ready to begin an oil exploration campaign with American-made rigs and other drilling equipment. The first test will be drilled near Lerida, 75 miles west of Barcelona. Other tests will be near Burgos and Malaga on the southern Mediterranean coast.

California contractors, who are represented throughout the world almost wherever oil might be found, some day soon may be aiding the development of oil in old Spain.

Continental Oil's Bixby No. 33 in the Seal Beach field is drilling on contract to Bell & Burden. Dunlap & Graham is drilling Hellman Estate No. 25, and K. L. Kellogg & Sons, Hellman Estate and Shell Oil, Bryant No. 1 in the field.

Rocky Mountain Drilling Co. has made a producer out of Standard's deep discovery well at Kettleman Hills Middle Dome. Hayes & Sprague is preparing to deepen Frank Buck No. 1 in the Lost Hills field for Richfield. Brown Drilling Co. has completed Standard's No. B-98 at Huntington Beach for an initial of 350 barrels a day. Miller & York, contractor, is rigging up Porter No. 74-28, sponsored by Union Oil west of the Edison field.

Santa Maria Drilling Co. is redrilling at 5100 ft. Honolulu Oil's Rincon test. William Thornbury has spudded D. D. Feldman's new well on the Richardson Estate at West Mountain. In Hopper Canyon, Ivy Drilling Co. is redrilling Commander Oil's No. 8F.

Severns Drilling Co. has been awarded contract to drill British-American Oil Producing Co.'s Bodger No. 3 in the Alondra Park area. Toolpusher is Bob Johnson.

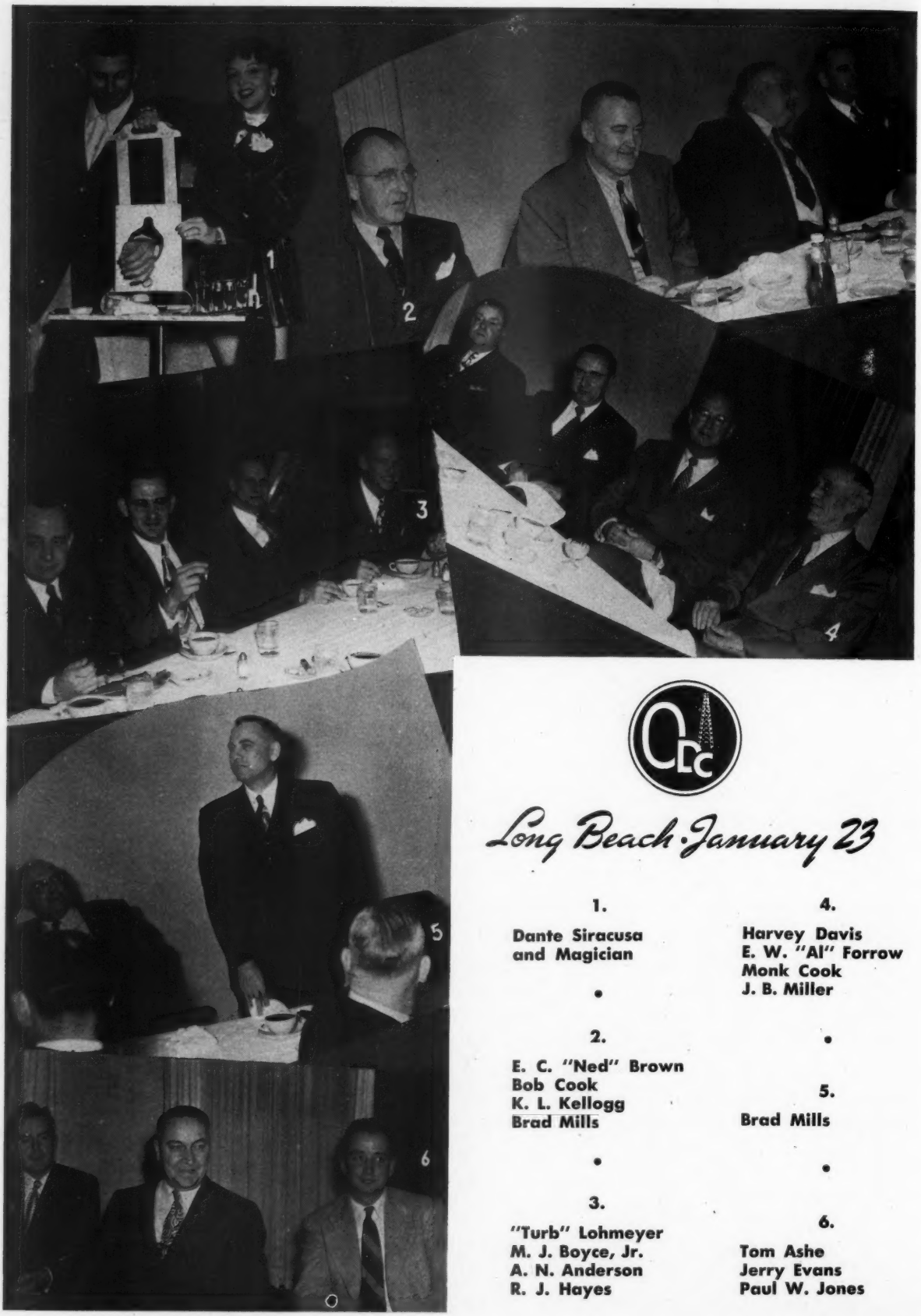
Other current Severns jobs are Cleveland Oil Co.'s Machado No. 5A at Inglewood, and British-American's Kump-Condley No. 57 at Race Track Hill.

Two new contracting drilling concerns have been organized in Bakersfield.

Corwin Drilling Co., 134 Bedford Avenue, plans to specialize in shallow oil well drilling. E. L. Corwin is general partner, and L. A. Miller and F. A. York, limited partners.

John G. Speirs Drilling Co., Inc. has as president, Ernest F. Smith. Paul O. Smith is vice president, and John G. Speirs, secretary-treasurer. The company maintains headquarters at 1315 30th Street. It is primarily designed to drill core holes and shallow test holes.

A. G. McHale, Long Beach contractor, has received contracts on two wells for Long Beach Oil Development Co. in the Long Beach Harbor field. Fowler Drilling Co. is in charge of Brookline Oil's new well at the Harbor. Contract for redrilling Anderson No. 4 for Rothschild-Bender Oil Co. at Sheep Springs is in the hands of Sillmore Drilling Co.



Long Beach · January 23

1.

Dante Siracusa
and Magician

•

2.

E. C. "Ned" Brown
Bob Cook
K. L. Kellogg
Brad Mills

•

3.

"Turb" Lohmeyer
M. J. Boyce, Jr.
A. N. Anderson
R. J. Hayes

4.

Harvey Davis
E. W. "Al" Forrow
Monk Cook
J. B. Miller

•

5.

Brad Mills

•

6.

Tom Ashe
Jerry Evans
Paul W. Jones

7.

C. F. Gates
F. A. York

•

8.

Walter F. Scott
R. E. Battersby
Thos. C. Bannon
E. R. Lorr

•

9.

Joe C. Brown
Jerome J. O'Brien
John F. McCarthy
Geo. H. McCarthy

10.

Fred Johnson
F. M. Crail
Ray Sprague
J. F. Herold

•

11.

Joe Kellogg
H. C. Cowan
J. E. Pettijohn
F. L. Shepherd
Don Greene

•

12.

Don Greene
George Murray

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Field Development

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Los Angeles Basin

New Alondra Test Starts

British-American Oil Prod. has foundation poured for its third drilling job on the Bodger lease in the Alondra area of Los Angeles County. Location is 330 ft. south and 95 ft. east of center of Sec. 22-3s-14w or 670 ft. north and 200 ft. east of Bodger No. 1.

La Mirada Job Tests

General Petroleum continues to perforate and test selected intervals in its La Mirada Comm. No. 46-1 in Sec. 16-3s-11w in the La Mirada area, northwest of Buena Park. Carried to a total depth of 12,629 ft. results to date have not been promising.

San Diego Try Digging

On the Sonja Henie estate near Oceanside, Snell Drilling Co. is prospecting at 1766 ft. with Henie No. 1 in Sec. 29-11s-4w, San Diego County.

Canoga Park Well On Pump

Dry Gulch Oil Co. is ready to pump its Dry Gulch No. 1 in Sec. 4-1n-17w on the Dry Gulch ranch near Canoga Park. The old Frank Knapp water well casing froze at 125 ft. The well bailed 12 barrels of 40 gravity oil daily.

Members of the company include J. C. Cloutman, A. W. Frost, Katherine W. Rose and Vincent F. Stabeck.

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BEST FOR DRILLING regardless of formations, depth or pump pressures; Goodall "Long Life" Rotary Hose is constructed of finest rubber and heavy duck plies reinforced with high tensile steel wire. It's a rugged, abrasive resistant hose that resists outward pressure and elongation.

BARNEY COUPLING—An integral part of the Goodall Rotary Hose eliminates clamps, stems, and metal from bore of hose, thereby removing cause of most rotary hose failures. Do away with high pressure leaks; order Goodall Rotary Hose with Barney Coupling.

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Please note the list of extra-value features opposite. Who can doubt that a job welded with fittings which lack these features does not sacrifice something—in speed of installation, in economy, in soundness, in the lasting satisfaction that goes with using the *best!*

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- **Wall thickness never less than specification minimum**—assures full strength and long life.
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Devils Canyon Wildcat Bores

Prospecting is continuing at 6170 ft. with Universal Consolidated Oil's No. 1 in the Devils Canyon area in Sec. 27-5n-17w, Los Angeles County. Nothing of interest has been encountered to date.

Chino Test Now Pumping

Water, mud and some oil to sump is being pumped by Grayco Oil Co.'s. Mahla No. 1 in Sec. 13-3s-8w near Chino, San Bernardino County. The old Mahla Oil Co. found oil in the area as long ago as 1920.

Riverside Co. Wildcat Drills

Palomar Petroleum Co is exploring at 935 ft. with Tyrell No. 1 in Sec. 13-8s-11w in the Temecula area, Riverside County.

Dominguez Try Redrills

Redrilling at 10,621 ft. in sand and shale is the latest report on Union Oil's Hellman No. 58 in Sec. 27-3s-13w in the Dominguez area. Original depth is 10,921 ft.

Standard Rigs El Segundo Try

Standard Oil is rigging derrick for its Six Companies Fee No. 3 in Sec. 2-3s-15w in the El Segundo area. Boobier No. 1 in Sec. 15-4n-17w near the Del Valle field is drilling at 4224 ft. German Comm. No. 1 in Sec. 11-3s-11w in the Leffingwell area is a rig. Newsom Comm. No. 1 in Sec. 36-2s-12w is making hole at 9999 ft.

Whittier Try Cleaning Out

After pumping 60 barrels a day gross, J. Paul Sievers' Atlas No. 1 in Sec. 17-2s-11w in the Whittier area evidently sanded up and clean-out operations are in progress. Total depth is 3455 ft.

The same course of events seemingly have occurred in Atlas Production, Inc., Community No. 1-2 in the section. Drilled to 3450 ft. and plugged back to 1110 ft., the well sanded up and is cleaning out.

Orange Co. Prospects

Near Fairview, Orange County, Bandini Petroleum is drilling shale at 5839 ft. with Segerstrom No. 1 wildcat in Sec. 34-5s-10w. Morton and Sons, Irvine No. 55-1 in the Corona Del Mar area is steadily progressing at 4473 ft.

Montebello Job Going

In the Montebello area, where oil has been produced since 1892, Barnsdall Oil Co. is drilling at 6390 ft. with its Cipes No. 1 wildcat in Sec. 7-2s-11w. Premier Petroleum Corp., Carla No. 1 in Sec. 8-2s-11w is making hole at 3837 ft.

Inglewood Try Skids Rig

Rig is skidding in for Basin Oil Co.'s City of Inglewood No. 1 in Sec. 28-2s-14w in the Inglewood area. The company some months ago found new oil supplies in the area.

Baroid Products

TODAY MAY STOP DRILLING TROUBLES TOMORROW

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IT'S THE FOOTAGE OF HOLE IN THE OIL SAND THAT COUNTS

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DRAIN YOUR OIL SANDS... *like Dutch!*

Horizontal drain holes greatly increase the total drainage area of an oil well. They also provide unimpeded passages for the oil to travel from all directions into the central bore. Slow and uniform drainage, insured by horizontal holes, greatly reduces tendency of the gas to by-pass the oil. The spacious drainage channels also act as underground collecting chambers in which the gas in solution is separated from the oil under decreased pressure and velocity and to a large extent re-enters the formation. This preservation of the formation pressure will enable the well to produce at a much higher rate without exceeding the limits of efficient production.

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Zublin

HORIZONTAL WELL DRILLING

Los Angeles Job Drilling

Richfield Oil is drilling at 6323 ft. with U. P. Unit No. 4 in Sec. 16-2s-12w in the East Los Angeles area, opened up by the company a year ago.

West Newport Project Tested

Amerada Petroleum is pulling tester from its Anaheim Sugar No. 62-7 in Sec. 7-6s-10w in the West Newport area, after running a formation test from 5775 ft. to bottom at 6000 ft. Recovery was oil, mud and salt water.

Ramona Field Yet Developing

The newest well in the Ramona field is Superior Oil and British-American Oil Producing's Black No. 6 in Sec. 13-4n-18w. It was finished at 5329 ft. for 66 barrels of net oil, with a cut of 44 per cent. Texas Company, meanwhile, is rigging pumps to Kern No. 13 and No. 14 in Sec. 18. Depths are 4150 and 4950 ft., respectively. Kern No. 15 is standing cemented with casing set at 2235 ft. No. 16 is drilling at 1468 ft. Bankline Oil is cleaning out Orduno No. 103 in Sec. 18 for a production test at 4986 ft. Black No. 105 has rig up and is moving ahead.

Richfield Adds Well

A. H. Bradford has completed Hartwell No. 4 in the Richfield field. It went to 4745 ft. for 11 barrels of 21.1 gravity oil on an 11 hour gauge.

Ten Section Project Deep

KCL-A No. 53-30, sponsored by Shell Oil in the Ten Section field, continues to drill ahead at 13,092 ft. Drill site is in Sec. 30-30s-26e.

Goshen Again Wildcat Scene

United Exploration Co., Bakersfield, has under consideration the drilling of a second wildcat in the Goshen area of Tulare County. An earlier test proved sub-commercial.

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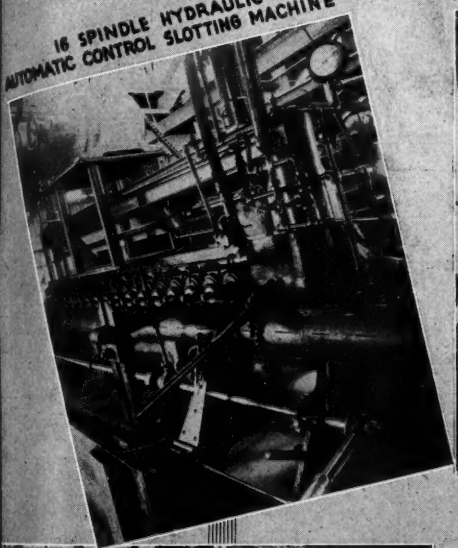
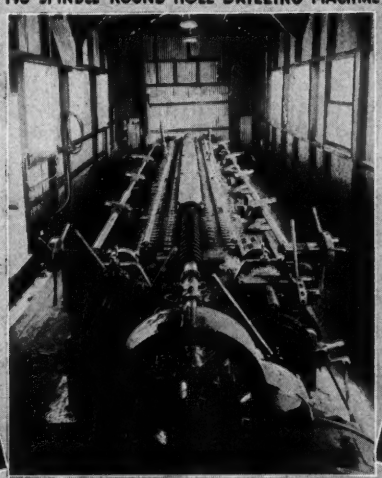
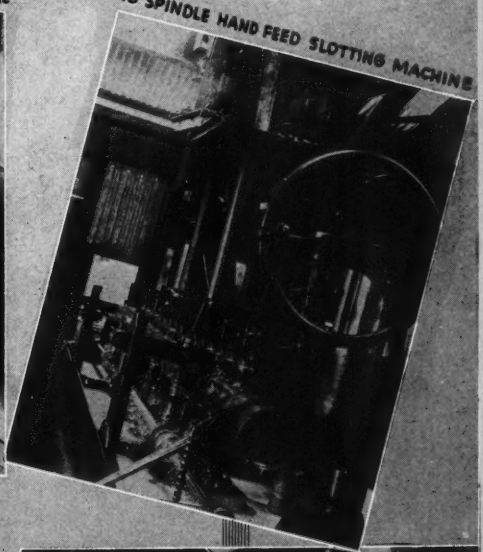


196 SPINDLE ROUND HOLE DRILLING MACHINE

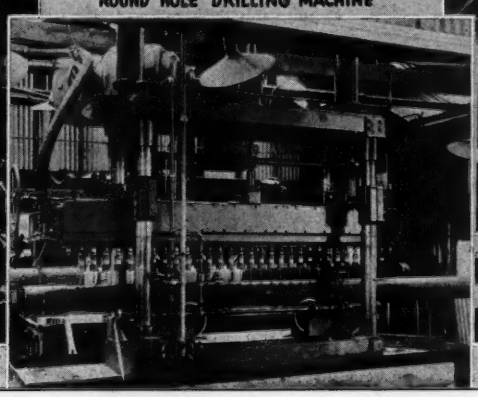


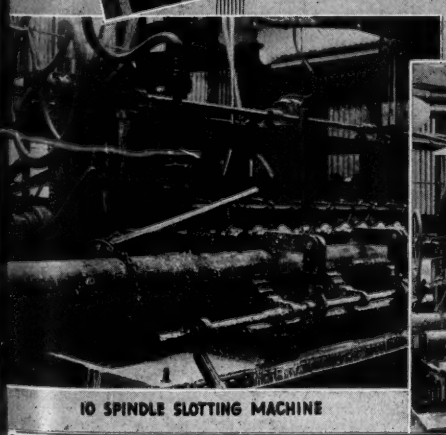
16 SPINDLE HAND FEED SLOTTING MACHINE



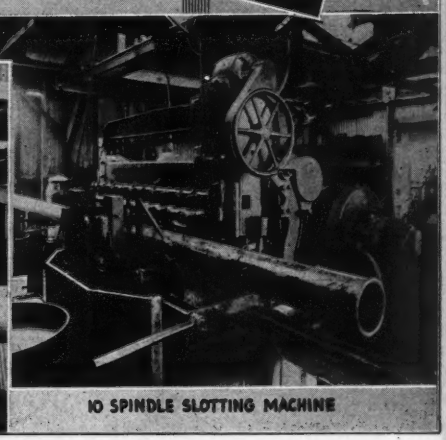
SERVICE

32 SPINDLE HYDRAULIC AUTOMATIC CONTROL ROUND HOLE DRILLING MACHINE





10 SPINDLE SLOTTING MACHINE



10 SPINDLE SLOTTING MACHINE

The Oil Tool Corporation

3075 Cherry Ave. Long Beach 7, Calif.

Phone 481-81 L. A. Phone NEvada 610-24

Coastal and Northern District

Fillmore Well Going

Goodenough No. 1, undertaken by Jahns Oil Co. in Sec. 18-4n-19w two miles north of Fillmore, is prospecting at 2025 ft. in Miocene shale.

Orcutt Test On Schedule

Sunray Oil Corp. plan to drill Los Flores No. 1 a wildcat test southeast of the Orcutt field in Santa Barbara County. It will go down in Sec. 4-8n-33w on a 5000-acre block leased by W. W. Porter, widely known Los Angeles geologist.

Fairchild Try Abandoned

Ohio Oil has written off its Edward W. Avila No. 1 in the Fairchild area of San Joaquin County as a production failure. The venture, located in Sec. 6-1s-6e, gave up the search at 4400 ft.

Winters Test Makes Progress

Shell Oil's Winters Unit No. 2-1 in Sec. 18-8n-1e in the Winters area of Solano County is drilling at 8495 ft., after an electric log run and sidewall sampling. Winters Unit No. 4-1 is a location in Sec. 5-7n-1e. Wagenet No. 2 in Sec. 19-4n-1e is standing with pipe set at 1495 ft.

Hydesville Well Cased

Texas Company's Anderson No. 1 in Sec. 8-2n-1e in the Hydesville area of Humboldt County, which has encountered considerable heaving shale, has set pipe at 7870 ft. for protective reasons. Bottom is 8500 ft.

Montalvo Try Reaches Depth

In the Montalvo area near Oxnard, Standard Oil is drilling at 11,363 ft. with McGrath No. 2 in Sec. 26-2n-23w. What has been found to date is more or less a company secret.

Goleta Test Drilling On

Honolulu Oil Corp., Honolulu-Signal-Goleta Comm. No. 1 in Sec. 24-4n-29w in the Goleta area, Santa Barbara County, is digging at 1675 ft. The well is not a great distance from a try sponsored by Bolsa Chica Oil Corp. in 1940. This earlier try found no commercial oil in the Vaqueros and Sespe formations and it was finally abandoned slightly below 4300 ft.

In the Rincon area, Ventura County, Honolulu's Signal-Bates No. 1 in Sec. 36-4n-25w is redrilling at 5052 ft.

West Mountain Active Center

F. E. Fairfield's new well in the West Mountain area, Richardson No. 2 in Sec. 23-3n-21w, is pumping 55 barrels a day, cutting 20 per cent

NO METAL! STRONGLY REINFORCED IN RIM FOR STRENGTH AND FLEXIBILITY . . .

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These tough, long-lived, oil resistant rubber wipers last longer than ever before, giving you quick, clean, easy handling of drill pipe; clean floors for safer footing; no tools or tong dies down the hole. LOWER IN COST, TOO!

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BAKERSFIELD VENTURA AVENAL

Bottom is 3190 ft., with casing set at 2630 ft. Indications are that Fairfield will plug back and perforate Honolulu Oil's abandoned Hobson No. 1 in the section on the Lamon Co. lease. The well in question was abandoned in the fall of 1937 at 6745 ft., after pumping some oil from an interval around 3600 ft.

Richardson Estate No. 2, also in Sec. 23, has been spudded by D. D. Feldman, Operator, and is drilling at 1110 ft. Plugged at 5039 ft. and standing is the present position of Los Nietos Co. & Lucy Smith Battson's C. & H. No. 3 in the section. Bottomed at 5181 ft. the well flowed gas, salt water and oil. Richfield Oil is ready to commence work on its Saticoy No. 1 in Sec. 22. Ring Oil is rigging up Fee No. 1.

King City Test Drills

In the Thompson Gulch area near King City, Shell Oil is drilling sand and shale at 4581 ft. with Honolulu-Thorup-UCL No. 1 in Seec. 4-20s-7e, Monterey County.

Lompoc Job Goes Ahead

Union Oil is making hole ahead below 1750 ft. with its Purisima No. 46, a wildcat in Sec. 14-7n-34w in the Lompoc area, Santa Barbara County. Oil was first found in the area by the company in 1903.

Elwood Adds Producing Well

Flowing 231 barrels of oil and 257,000 cubic ft. of gas, Signal Oil Co. has added State No. 208-11 in Sec. 8-4n-29w in the Elwood field. No. 129-12 is drilling at 3811 ft. Location has been staked for No. 208-4. The field has been a producing center since 1928.

Cat Canyon Well Grading

Ground is being graded for Krieger Oil Co., Los Flores No. 1 in Sec. 22-9n-33w in the Cat Canyon field. Loations are made for Nos. 2, 3 and 4.

Santa Maria Wells Pumps

Bolsa Chica Oil Corp. has completed at 4303 ft. its Wheat No. 4 in Sec. 22-10n-34w in the Santa Maria Valley field. It flowed to sump at the estimate rate of 75 barrels daily. At last reports yield was 10 barrels of 16.3 gravity oil a day, along with an estimated 200,000 cubic ft. of gas.

C. & C. Oil Co. is drilling Hope No. 1 in Sec. 21 at 3852 ft. Rothschild Oil Co. is grading well site for Boyd No. 1 in Sec. 32. Five C. Refining Co. has reached a depth of 4810 ft. with Nelson No. 4 in Sec. 35.

Shiells Canyon Project Grades

Texas Co. will drill another well on its Shiells lease at Shiells Canyon, Ventura County. Location is being graded in Sec. 4-3n-19w. It is known as No. 158.

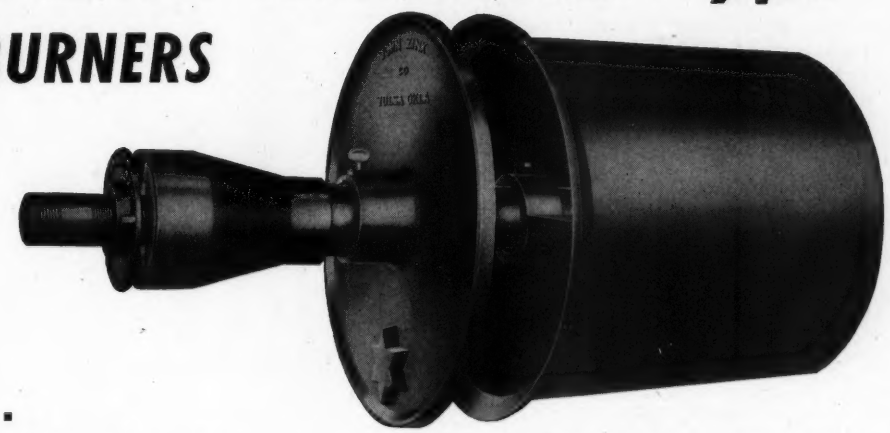
Montebello Oil & Gas Co. first developed production in the area 46 years ago.

Gato Ridge Job Fishing

Standard Oil Co. is fishing for drill pipe in its Tognazzini No. 348 in Sec. 15-8n-32w in the Gato Ridge field, with bottom at 3810 ft.

JOHN ZINK Horizontal Type BI-MIX BURNERS

"Can't Be Beat for Fool-Proof Operation"



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JOHN ZINK COMPANY

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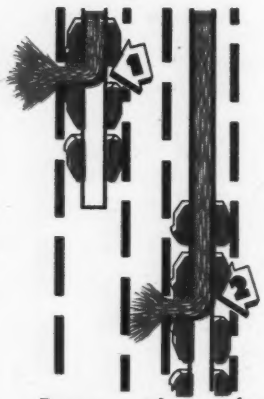
North Belridge Wildcat Starts

Casner and Bentz (Ralph Casner and J. O. Bentz) have made location for Osmont No. 1 in Sec. 3-27s-20e, approximately three miles north of the North Belridge field. Meantime, Richfield Oil is rigging up Belridge No. B-2 in Sec. 21.

Temblor Try Starts Work

Cal Oil & Gas Co., Bakersfield, is starting work on its Cal No. 1 in Sec. 25-29s-20e, a short distance north of the Temblor field in Kern County. The company, headed by R. Van Sandt, has 80 acres under lease.



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Power — plenty of power to break up the solidified material clogging the slots or perforations, or to scour filter cake from the formation face . . . that's WHY an M-T Pressure Washer really gets results. And here are the TWO reasons it has such tremendous power: (1) The packers can be placed as close together as ¼ inch, confining all the pressure of the wash fluid to a tiny space and building up terrific jetting action. (2) The entire packer assembly moves the full length of the stroke, bringing that powerful jet against every inch of wall or liner.

In short, it acts just as you do when you wash mud off your driveway. You adjust the nozzle for a narrow stream to give greater force, and you sweep that stream back and forth until the pavement is clean. But you'll want the full details on pressure washing, so

Write for NEW Well Washing Bulletin, or ask a representative to demonstrate transparent model.

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PIERCE ROAD, BAKERSFIELD, CALIFORNIA

New Tejon Exploration

Approximately five miles east of the Tejon field, Richfield Oil is rigging derrick for its Tejon No. B-1 in projected Sec. 28-11n-18w. Berry No. 1 in Sec. 30-28s-21e at South Belridge is drilling at 8534 ft. Frank Buck No. 1 in Sec. 6-27s-21e in the Lost Hills area is ready to deepen from present depth of 3005 ft. C. L.-A No. 21-33 in Sec. 33-30s-25e in the Coles Levee field continues to perforate and test, with bottom at 14,003 ft.

Comanche Pt. Test Planned

Albert Angus, Arvin independent operator, is planning to drill a well known as Tejon No. 1 in Sec. 21-32s-30e in the Comanche Point area, Kern County.

South Belridge Well Tests Wet

Tubing is being fished in Belridge Oil Co.'s No. 62-W-33 in Sec. 33-28s-21e in the South Belridge area, after well was wet on test. Total depth is 14,107 ft., with casing set at 13,944 ft.

Kern River Try Foundation In

Bender Oil Operations has foundation poured for its Claire No. 2 in Sec. 22-28s-28e in the Round Mountain area. Independent Exploration's Olcese No. 1 in Sec. 21-28s-29e has been abandoned at 1879 ft. M. R. M. Syndicate, Claire No. 4 in Sec. 22-28s-28e last was reported bailing at a plugged depth of 2715 ft.

Morton and Kohlbush has spudded Alma No. 1 in Sec. 15-28s-28e and is making hole ahead below 1550 ft.

Pyramid Hills Prospect Digs

Buass Development Co. is drilling at 2295 ft. with Deming No. 1 in Sec. 29-24s-18e in the Pyramid Hills area of Kings County. Location falls 14 miles southwest of Tulare Lake.

Arvin Well Rigging Pump

Western Gulf's Di Giorgio No. 1 in Sec. 10-31s-29e in the Arvin area is rigging pump. Original depth is 6577 ft., with plug at 6504 ft. and 2½-inch tubing at 5830 ft. The well took several hundred feet of the schist zone and apparently is a discovery of some degree of importance.

On adjacent ground, Bolsa Chica Oil's Di Giorgio No 8-3 in Sec. 3-31s-29e is still a location. Hancock Oil continues to make headway with its Di Giorgio No. 1 in Sec. 4. Present depth is 4219 ft.

Honolulu Oil's Honolulu-General Petroleum Derby No. 1 in Sec. 15-31s-29e is rigging derrick to begin drilling operations. In Sec. 9-31s-29e, Tide Water Associated is coring at 7050 ft. with Tupman No. 23-9. The Upper Fruitvale was reached at 7047 ft. and present formation is siltstone.

Coalinga Job Drills

Sharples Corp., Denver organization with large oil holdings in the Rocky Mountain area, is drilling on down at 6811 ft. with its Hyde No. 1 in Sec. 6-19s-16e in the Northeast Coalinga area. This is the company's first venture in California.

Race Track Well Deeper

In the Race Track Hill area, British-American Oil Prod. Co. and Capital Co.'s Kump-Condley No. 57 is making drilling progress at 3474 ft.

McKittrick Try To Swab

Running tubing to swab is Wilshire Oil's McKittrick No. 2 test in Sec. 12-30s-21e in the McKittrick area. Drilled to a bottom of 6691 ft., the well on formation test of four holes at 6417 ft. showed a recovery of an encouraging amount of oil. Casing is cemented at 6431 ft.

Sand Hills Test Ready

Western Gulf is ready to start on its S. P. No. 1 in Sec. 34-32s-28e in the Sand Hills area. Location falls near the Los Angeles-Bakersfield main highway. The company's T. K. Case No. 1 in Sec. 23-11n-23w in the Santiago area is redrilling at 3120 ft., after going originally to a total depth of 3826 ft.

Johnston Stainless Welding Rods

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San Emigdio Try Fishing

Fishing for all drill pipe comprises present operations with Continental Oil's K.C.L.-1, a wildcat test in Sec. 11-11n-22w in the San Emigdio area. Hole is bottomed at 10,014 ft., with casing set at 8069 ft.

Devils Den Well Bails

S. R. DeKalb is bailing Blake No. 15 in Sec. 25-25s-18e in the Devils Den area, with bottom at 990 ft. Casing is set at 630 ft.

Kingsburg Test Drills

Frakes Oil Co.'s Toscan No. 1 wildcat test in Sec. 28-16s-23e in the Kingsburg area, Tulare County, continues to prospect at 2325 ft.

Cellar Dug For Midway Wildcat

Cellar is in for General Petroleum's No. 14 wildcat in Sec. 32-12n-23w in the Midway-Sunset area. The try probably will be spudded early in March.

Middle Dome Test Working

Standard Oil Co. is preparing to again test its No. 73-30V in Sec. 30-23s-19e in the Middle Dome area of Kettleman Hills, after running tubing with packer and Otis choke for an unsuccessful trial, due to choke not seating properly. Total depth is 12,389 ft.

Danciger Oil & Refining Co., Tulsa, Okla., has obtained an oil and gas lease covering the northeast quarter of Sec. 25-23s-18e, containing 160 acres, from the Bunting Estate Co. of San Francisco.

Trico Test Runs Pipe

The extension test of the Trico gas field sponsored by Lebow and McNee is standing with casing cemented at 3350 ft. Located in Sec. 19-24s-23e, total depth is 3368 ft.

Showings will be interrogated in the Atwell Island zone and the upper Mya horizon.

POURING WATER ON TROUBLED OIL

No more troubled oil from clay filled sands—HI-PERM mixed with either fresh or salt water at the well and run through the liner to the clogged sands will result in increased permeability and more oil. Results show as high as 15 to 1 increase in production after HI-PERM treatment.

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Reef Ridge Try Squeezed

Having tested wet in the interval of 4722-4729 ft. Kings Exploration Co., Avenal No. 1 in Sec. 18-23s-17e in the Reef Ridge area of Kings County is standing squeezed.

Jasmine Job Hits Granite

In the Jasmine area, Kern County, Harp and Brown's Quinn No. 1 in Sec. 11-25s-27e is reported in hard granite at a depth of 2332 ft.

New Cymric Well Starts

Location has been staked by Independent Exploration for a new wildcat test in the Cymric area. Known as Roco No. 1 it will drill in Sec. 18-29s-21e. Woods No. 14 in Sec. 16- 29s-21e at Sheep Springs is drilling shale at 4969 ft. A core at 4850-4870 ft. was hard shale showing 51-degree dips. Anderson No. 48 in Sec. 19-28s-20e near Santos Creek is standing suspended at 3187 ft.

Desert Test Stands Idle

J. E. Johnson, M. & R. No. 1 in Sec. 9-23s-29e in the Mojave area is inactive at 2400 ft. The future course of the project is yet to be announced.

Mount Poso Well Fishes

With bottom of the hole at 1389 ft., Elmer C. von Glahn is fishing for drill collar and bit in Hooper No. 1 in Sec. 36-26s-27e in the Mount Poso area.

West Edison Test Rigging

West of the Edison field, Union Oil is rigging up for Porter No. 74-28 in Sec. 28-30s-29e, Kern County.

McKittrick Well Coring

Tide Water Associated is coring at 7050 ft. with Midway-McKittrick No. 5-32 in Sec. 32-30s-22e in the McKittrick area. On formation test of the interval of 6885-6935 ft. recovery was one stand of gas-cut mud and no oil. Top of Point of Rocks is placed at 6905 ft.

Raisin City Test Listed

Superior Oil Co. has location staked for its Hackala No. 55 in Sec. 32-15s-17e in the Raisin City area of Fresno County. Drill site is about 3 miles southeast of the town of San Joaquin and one-half mile northwest of the company's San Joaquin No. 88-32, which was drilled to 7311 feet and abandoned in September, 1944.

Superior's effort to develop new oil in the Traver area of Tulare County has come to naught. The well, Pratt No. 1 in Sec. 15-17s-23e, went on an unsuccessful hunt to 3887 ft.

Coalinga Wildcat Sidetracking Liner

Standard Oil Co. is endeavoring to sidetrack liner in its No. 213—35A explorer in Sec. 35-19s-15e in the Coalinga area. Total depth is 5775 ft., with plug at 3030 ft. and 7-in. casing set at 2663 ft.

Williams Try Keeps Drilling

Having successfully completed a fishing job, Signal Oil & Gas Co., Honolulu-Carpenter No. 1 in Sec. 6-28s-19e in the Williams Anticline district is drilling ahead at 3817 ft.

Deep Well Sets Pipe

Pacific Western's National Royalties No. 1 in the Miramonte area in Sec. 5-26s-22e, Kern County, the only rig the company currently has in operations in California, is running 5½-in. casing to set on top of fish. The well will be gun perforated for production. Total depth is 16,668 ft. Fish was recovered to 16,431 ft.

Bacon Hills Well Drills

Seaboard Oil's Seaboard-Bandini No. 3-21 in Sec. 21-28s-20e in the Bacon Hills area is digging on down at 7926 ft. Garrison-Davis No. 1-5 in Sec. 30-29s-29e is making hole at 5469 ft.

THIS LAUGH

OFF!!

Willie Johnson, a sawed-off, beaten down little man, was arraigned in a Texas court on a felony charge.

The clerk intoned: "The State of Texas versus Willie Johnson!"

Before he could read further, Willie almost broke up the meeting by solemnly declaring: "Lawd! What a majority!"

"Does you take this woman for your lawfully wedded wife?" asked the Negro minister of an undersize, bowlegged, watery-eyed shrimp of a man standing up beside 200 pounds of feminine assurance.

"Ah takes nothin'," responded the little man gloomily. "Ah's bein' took."

The Boss: He's the fellow who's at the office early when you're late, and late when you're early.

A six-year-old was taken to church for the first time. After she returned home her uncle asked her how she liked church. She answered. "I like the music okay but the commercial was too long."

Mike Clancy had been working on New York harbor tugboats for fifty years when he fell overboard and was drowned. This brought about a very fine wake, at which the highest praise was given the deceased and all the traditional ceremonies were observed.

During the proceedings, a friend of the widow asked her: "Did Mike leave you well fixed?"

"Shure, an' he did that. 'Tis fifty thousand he's after leavin' me."

The friend rolled her eyes heavenward. "Tch tch tch," she said. "Think of that. And him that couldn't read or write."

"Yes," agreed the widow, shaking her head seriously, "nor swim."

"I have a husband who is rich,
He adds much to my life,
He buys me everything I want—
But please don't tell his wife!"

Pleading "not guilty" to a drunk charge a man in Chicago claimed he had had "only one drink."

"From a water glass or a bathtub?" roared the judge.

Bill: "What kind of a girl is she?"

Joe: "Oh, she's the kind of a girl a guy could take home to his mother if he could trust his father."

Kindly clergyman (pinching little boy's knee): "Who has nice chubby pink knees?"

Little boy: "Betty Grable."

The drunk sitting at his favorite bar was startled when a horse entered the establishment and in clear, understandable English ordered two Martinis with two olives in each. After the bartender had mixed 'em up, flipped two olives in each cocktail glass and poured 'em out, the horse swallowed his drinks in quick succession, paid his bill, said, "Good afternoon, gentlemen," and left.

"Say," said the drunk, "isn't that a bit unusual?"

"No," replied the bartender, "I frequently put two olives in a Martini."

"Your Honor," said the lawyer, "I submit that my client did not break into the house at all. He found the parlor window open, inserted his right arm and removed a few trifling articles. Now, my client's right arm is not himself, and I fail to see how you can punish him for an offense committed by only one of his limbs."

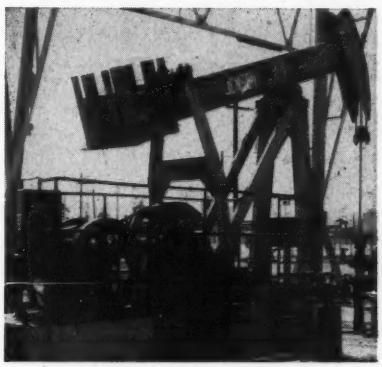
"That argument," said the judge, "is very well put. Following its logic, I sentence the prisoner's arm to one year's imprisonment. He can accompany it or not, just as he pleases."

And the prisoner unscrewed his cork arm, laid it on the counsel table and walked out.

"How can you cure someone of snoring?"

"Easy. By good advise, cooperation, kindness and stuffing an old sock in his mouth."

YOU GET WHAT YOU PAY FOR...



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This means one thing: more economical pumping on any well at any depth.

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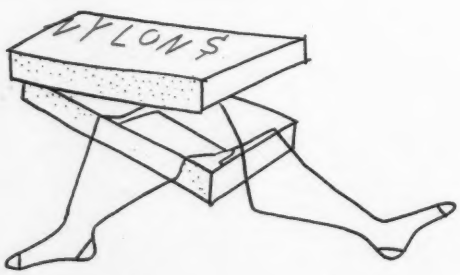
What about CONTAINERS?

Bottles usually contain medicine, milk, hair-tonic, liquor or other liquid commodities. The case illustrated, the bottle-message, is unique in that the bottle is surrounded by liquid rather than the usual vice versa . . .

The purse, used chiefly to contain coins. Another version, "the ladies' purse," is much larger and contains godonlyknowswhat. Coin purses are not particularly good containers, except when carried by the Scotch . . .



Nylons, properly filled, make extremely attractive containers. The main problems involved in the use of nylons as containers are (1) getting the nylons; (2) getting them filled . . . properly . . .

"Stone walls do not a prison make, nor iron bars a cage." Lovelace (or somebody) is credited with this soulful, if somewhat inaccurate, sonnet. The jailhouse, or klink, has long been recognized as an effective container.

IN THIS CASE, HOWEVER, the importance of the container is secondary to the excellent product it contains. If you have an emulsion problem, call your Tretolite field engineer and have him roll out a drum of Tret-o-lite . . . it contains the answer to emulsion problems. FOR EFFECTIVE DEHYDRATING, get TRET-O-LITE!

COMPLETE SERVICE FOR EVERY FIELD

TRETOLITE COMPANY

Manufacturing Chemists

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DEHYDRATING DESALTING

47-C

Personalities IN THE NEWS

Ed McAdams, one of the leading independent operators of the country, passed away at Big Springs, Texas, of a heart ailment. In his 62nd year at the time of his death, McAdams made his home in Texas part time and at Long Beach with a son, David.

McAdams was superintendent for Marine Oil Co. and other independent organizations in early development at Signal Hill. He is credited with the discovery of the famed Lovelady pool. He also drilled the discovery well at Kettleman Hills.

He brought the first rotary drilling equipment to California. He came to the Pacific Coast from the midwest 40 years ago.

Only a few days before his death, McAdams was in Long Beach supervising the construction of a gasoline station at Temple Avenue and Seventh Street, owned by his son.

His development work at Signal Hill was largely in the Cherry, Lovelady and Orange Avenues sectors.

Searchlight Lodge No. 577 at Long Beach conducted last rites.

Through the courtesy of Torrey H. Webb, vice president of the Texas Co., a motion picture of oil development at Saudi Arabia was shown at the annual meeting of the San Joaquin Valley Oil Producers Association at Bakersfield. Los Angeles was represented at the meeting by a large contingent of oil men.

Reese H. Taylor, president of Union Oil Co. and prominent community leader, has accepted a post on the Southern California executive committee of American Relief for Italy, according to an announcement by Joseph Di Giorgio, state chairman of the organization.

Walter Elliot Passes Away

Walter Elliot, General Drilling Superintendent of Shell Oil Company, Incorporated, and for more than thirty years an employee of that firm died February 7 in Los Angeles following an operation. The news was received with great regret by the entire oil industry, in which Elliot had been a leader for three decades.

Walter Elliot

Born in Sisquoc, California, on February 2, 1888, Elliot attended Santa Maria High School and was graduated from Stanford University in the Class of 1911 wth Degrees in Bachelor of Arts and Civil Engineering. Shortly after leaving school, he joined the Western Union Oil Company and continued with Shell when the Western Union properties were acquired by that company. In 1922 he was made superintendent at Santa Maria and in 1926 transferred to Long Beach in the same capacity. He was appointed General Drilling Superintendent in Los Angeles in 1928, the position he held at the time of his death.

He is survived by his wife, who lives at the family home, 1779 Virazon Drive in La Habra, and by two sons, William Elliot of Los Angeles and Walter Elliot, Jr., now in Egypt with Socony Oil.

Funeral services were held Monday, February 10, at the White-Emerson Chapel in Whittier.

Lane-Wells Advances Two

Ray Hancock, former California Division Operating Superintendent has been appointed Division Sales Manager of Lane-Wells Company, according to James W. McPhee, Division Manager. T. R. Homer has been advanced to the post of Division Operating Superintendent. Both of these promotions followed the resignation of Keith Miner, who has joined Russell Keener, former Lane-Wells Purchasing Agent in the organization of Petro-Tech Service Company. The latter company will provide gun perforating and allied services in Western Venezuela.

Endres Advanced at G. P.

Promotion of A. P. Endres to the post of assistant to the public relations director of the General Petroleum Corporation was announced today by W. B. Curtis, public relations director.

Mr. Endres, a Stanford graduate in 1933, has been with the concern eight years, mostly in the advertising and sales promotion department of the home office. He is married and has two children. The family home is at 701 East Valencia Avenue, Burbank.

The advancement is effective immediately.

Leigh Battson, oil producer, civic leader and sportsman, and Mrs. Battson celebrated their 15th wedding anniversary the other day. They were honored by a dinner party given for them by the Bob Lytles.

Bigger Pay-off ON PRODUCTION JOBS!

PATTERSON-BALLAGH PRODUCTION TOOLS PROVE POPULAR WITH PRODUCTION MEN.

DEEP WELL SWABS For Tubing or Casing

FOR MORE POSITIVE SWABBING

Field production men like the dependability of Patterson-Ballagh's Deep Well Swab for swabbing away to a good start. It saves time and money in getting a well on production. Two years' field testing with top production crews taught us much about the better swabbing methods. You may find these facts useful to you.... Write for Patterson-Ballagh Booklet No. 340.

PLASTIC TUBING PROTECTORS

SUCKER ROD PROTECTORS

FOR FEWER WELL PULLING JOBS

When a well goes on the pump, the job is to keep it pumping. Tubing failure, due to friction caused by rod and pump pulsation is a constant cause of well pulling jobs. Patterson-Ballagh's Sucker Rod Protectors are specially designed to stop wear inside the tubing. The patented Plastic Tubing Protector, described in Booklet No. 180, saves wear between tubing and casing. At a small cost, these tubing savers reduce the number of expensive well pulling jobs.

TUBING WIPER

SUCKER ROD WIPER

WIRE LINE WIPER

FOR CLEANER, SAFER AND QUICKER WELL PULLING JOBS

As long as pumping wells are being operated, well pulling still has to be done. Costly rig-clean-ups and crew discomforts can be avoided with Patterson-Ballagh Sucker Rod, Tubing and Wire Line Wipers. These three favorites do the dirty work and keep the oil down the hole where it pays. Crews and equipment stay clean and work is safer. Booklets No. 180, No. 310, and No. 330 give you complete information on the use of Patterson-Ballagh Wipers for *Production Profit Protection.*

Write for the 1947 Patterson-Ballagh General Catalog and also see your Patterson-Ballagh man for a demonstration.

Specify **PATTERSON-BALLAGH**

A DIVISION OF BYRON JACKSON CO.

"Best Bet Yet"

OIL FIELD PRODUCTION SPECIALTIES

Main Office: 1900 E. 65th St. Los Angeles 1 ★ 6247 Navigation Blvd. Houston 11 ★ 808 Graybar Blvd. New York 17 ★ 921 Russ Bldg. San Francisco 4

A Correction on Axelson Foreign Sales Set-up

The management of the Axelson Manufacturing Company, well-known manufacturers of production equipment shipped to all oilfields throughout the world, has asked that a clarification be made in connection with an article recently appearing in these columns regarding representation of that firm in Venezuela and Colombia.

Through a regrettable misunderstanding, the article stated that Axelson is being represented in Venezuela and Colombia on pumps, sucker rods and lathes, by C. A. Industries Waldrip y Campbell.

For many years past, and at present, Axelson is represented in Venezuela and Colombia by Mr. C. C. McDermond, Maracaibo, Venezuela. However, with the thought of giving operators in foreign fields the same efficient service and assistance as extended by the many Axelson sales representatives stationed throughout principal domestic oilfields, Axelson at present is considering a change in policy in the handling of sales and service in certain South American countries. At present a very thorough survey is being made by M. Ray Conger—Axelson production service man—throughout Venezuela, Colombia, Peru, Ecuador and the British West Indies. Present results of the survey by Mr. Conger indicate that field personnel look with favor upon Axelson's plans for handling sales and service in these South American countries. It is very likely that Mr. Conger will remain in South America, with headquarters in Venezuela, to direct Axelson's program of direct field service.

Negotiations with C. A. Industries Waldrip y Campbell in regard to possible Axelson representation in Venezuela and Colombia are held in abeyance, pending the completion of Conger's survey of these South American fields.

Cymric Job Redrilling

Rothschild-Bender Oil Operations, Anderson No. 4 in Sec. 20-29s-21E in the Cymric area is redrilling at 4090 ft. Original depth is 5277 ft.

Petroleum Production Pioneers Elect 1947 Officers

At an executive meeting of Petroleum Production Pioneers, held in the Jonathan Club, Los Angeles, February 11, J .E. Gosline, southern district manager for Standard of California, was elected president of the organization for a second term. Elmer L. Decker, Martin-Decker Corp., was named vice president, and O. W. Morgan, Jr., Byron-Jackson Company, and L. M. Coker of the same company, were elected sergeant-at-arms, and assistant sergeant-at-arms respectively.

The incumbents, as follows, will retain all other offices through the current year: C. S. Perkins, Union Oil Company, treasurer; E. W. Webb, Continental Oil Company, assistant treasurer; R. Sneddon, the Petroleum Engineer, secretary; T. A. Atkinson, General Petroleum Corporation, assistant secretary; Ted Sutter, Baker Oil Tools, Inc., historian; H. H. Roberts, Standard of California, publicist; J. J. Siegel, Kobe, Inc., was again named chairman of the membership committee.

The organization now numbering almost 600 has an ambitious program, one item of which is the early revision of the constitution to permit the establishment of chapters in other oil producing states. Much headway has been made toward one of the primary purposes of the organization—the writing of an accurate and authentic history of the petroleum industry of California. Under the direction of Ted Sutter, it is expected that details of a cooperative plan for the completion of this project will soon be available.

Looking somewhat into the future, perhaps, but nonetheless a definite feature of the overall program, is the institution of a museum which will contain early tools, pioneer equipment, and all the intriguing mementoes that can be gathered together to recall the evolution of a great industry from its first haphazard days right up to its present highly scientific state of development.

Other interesting conclusions arrived at during the meeting were the decision to publish the Three-P Press, an organization newssheet, every three months; the appointment of a committee to consider the holding of certain open meetings in places convenient to a rapidly growing San Joaquin Valley membership; and a resolve to continue the effort to sign up every eligible petroleum production pioneer in the state of California.

Herbert Hoover, Jr., president of the United Geophysical Co. of Pasadena, is on a business tour of Venezuela, Colombia and Peru. He is accompanied by Howard Myers of the company, who recently organized a water party in New Orleans, designed to conduct a seismic study in the Gulf of Mexico.

The United Geophysical Co., which was organized by the former President's son in 1937, has approximately 40 units working in various world oil centers.

C. A. Johnson, Socal Oil and Refining, has been named president of the Independent Refiners Association of California for the ensuing year. D. B. O'Neill was elected vice president and manager, and M. M. McCallen, McCallen Refining, and Clifford Hancock, Caminol, vice presidents.

Directors named were J. D. Sterling, Eagle Oil and Refining; W. G. Krieger, Krieger Oil, D. S. Fletcher, Fletcher Oil; and B. E. Devere, Pathfinder Petroleum.

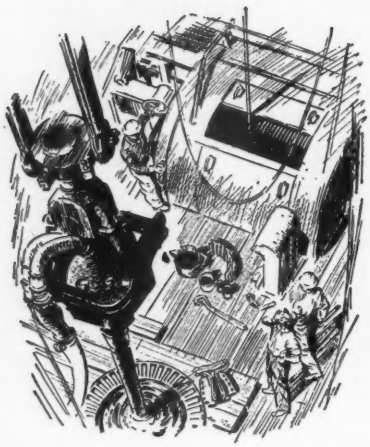
More than 100 delegates of the International Labor Organization enjoyed a western style barbecue as guest of the Shell Oil Co. at its Brea barbecue pit. S. F. Bowlby, vice president, welcomed the guests, who represented the 12 oil producing nations of the world.

Walter Cameron, long identified with San Joaquin Valley oil development, has returned to headquarters at Hanford, following a business stay in Los Angeles. He maintains branch offices at Los Angeles in the Park Central Building.

Dr. Douglas H. Hough, new president of the Huntington Beach Chamber of Commerce, announced that plans are under way for organizing a building and loan association, sponsored mostly by men identified with the oil industry.

What is Profit?

1. Before people can have such things as shoes and gasoline and vacuum cleaners, at least two things are necessary. Someone has to provide the *"tools"* and *raw materials* you need to make those products. And someone has to perform the labor of turning them out.



2. Now if you're going to ask a man to put all his *labor* into the production of gasoline and petroleum products *for other people*–instead of expending it on things for his family and himself–you obviously have to compensate him in some way. Under our American economic system we do this with *wages*.

3. By the same token, if you're going to ask a man to put his *money* into "tools" and raw materials that will produce gasoline *for other people*–instead of spending it on things for his family and himself–you have to compensate *him* in some way. So we offer the "tool-provider" a chance to make a *profit*.

4. At Union Oil, for example, 34,970 individual Americans have put up varying amounts of money to provide the refineries, drilling rigs, service stations, etc., that we need to make and distribute petroleum products. If the company makes a profit these people–called shareholders–are rewarded with cash dividends.

5. As a rule, about half the profits are plowed back into more "tools" and half are paid out in cash dividends. But the *total* profits each year are much smaller than most people think. In 1945, for example, they amounted to only 5.9% on the capital invested in the company – less than 6¼¢ out of each dollar the company took in.

6. It seems to us that this is certainly not an unfair reward for the contribution these "tool-providing" people have made to the company. And without this profit *incentive* we Americans could never have achieved the high productivity and efficiency that have made this country great.

UNION OIL COMPANY

OF CALIFORNIA

This series, sponsored by the people of Union Oil Company, is dedicated to a discussion of how and why American business functions. We hope you'll feel free to send in any suggestions or criticisms you have to offer. Write: The President, Union Oil Company, Union Oil Bldg., Los Angeles 14, Calif.

AMERICA'S *FIFTH* FREEDOM IS FREE ENTERPRISE

Kern County OIL NEWS

TEHACHAPI'S HILLS are green again, but some of its Mountains are slightly snow covered. However, the slow spring and lightly draught kept some geologists experimenting with the weather along with the oil.

MONTHS AGO we made a good guess about the impending strike and had it all settled for the readers. As we go to press we have the same plague before us and another guess is that "twont happen". Everyone agrees that it should not take place, oilworker and oiloperator alike talk this way. It's a good sign generally.

TENNANT BROOKS who has been with Glenn Ferguson, Independent Consultant, is taking a position with Standard Oil of California at Taft, in the "paleo lab." Best wishes, Tennant.

TO ANGUS J. CRITES this year came blessings of appreciation. To him from oilmen everywhere dispersed round this nation came acknowledgments of grateful recognition. Such tribute paid was evidenced at the instance of the 1947 annual meeting of the three associations in session at Bakersfield in Kern County California. I.P.A.A.'s national officers, the I.O.P.A. and the San Joaquin Valley Oil Producers Association were there with their friends in goodly numbers. Each speaker present lauded Angus as "the grand old man of the petroleum industry" as they enumerated his 61 years of faithful and unselfish service.

FOREIGN COMPETITION defenses were also mapped at the meeting during which problems of national, international and even domestic concern filled the agenda. An **OILDING** preceded the program, courtesy of Angus Crites.

ANGUS J. CRITES was presented with a watch by taxpert Harry A. Hopkins at the annual meeting of the I.P.A.A., I.O.P.A., and the San Joaquin Valley Oil Producers Association as they met in Kern County, Bakersfield a fortnight or so ago.

TRIBUTE paid was measured in terms of 61 years of unselfish service from the San Joaquin Valley members of the I.P.A.A.

PARTICIPATING at the ceremonies which followed a buffet dinner and **"OILDING"** were George Haberfelde industrialist, B. A. Hardey, president of the I.P.A.A. Russell Brown, chief counsel for I.P.A.A. and others.

SAFEGUARDS against competition from abroad, notably the Middle East and Venezuela highlighted another phase of the discussion. A reduction of "above ground" storage is necessary to balance supply and demand it was pointed out.

TIDELANDS in California and their controversy as handled by Gearhart and Elliott in Washington brought praise from Angus Crites. . . . as he related the ability and knowledge of the members of congress from this area.

I.P.A.A.'s President B. A. Hardey of Shreveport, La., Russell Brown general counsel at "DC" and C. E. Buchner of Tulsa, Okla. executive manager were on hand. H. B. Fell of Ardmore, Okla. executive vice president was also one of the speakers present. It was Fell who declared that 49 millions of barrels of oil have been added to the above ground storage during 1946.

PRESIDENT B. A. HARDEY of I.P.A.A. disclosed that "while the 45 per cent barrel increase has been of tremendous help to the industry, I view the future with some apprehension."

OILWINGDING or "oilding" as the Kern oilwigs called it, lasted all too soon and valuable social and commercial secrets were at a minimum.

EVEN RUSSELL BROWN and friends folded their papers and listened for a story. This one was about the night watchman who forgot his lunch and went off the job on a rainy night for a run back home. He was happy and careful to find his boss visiting his home because to this day the boss does not know that the NW left his post for a moment.

REESE TAYLOR, President of Union Oil Company appears front famous "Sales Management". In an article "Free Enterprise: What Is It, and How Does It Work" . . . his page style in a recent issue of advertising explains what makes job, what happens to profits, and how to raise wages of labor. San Joaquin Valley Oil Producers As-

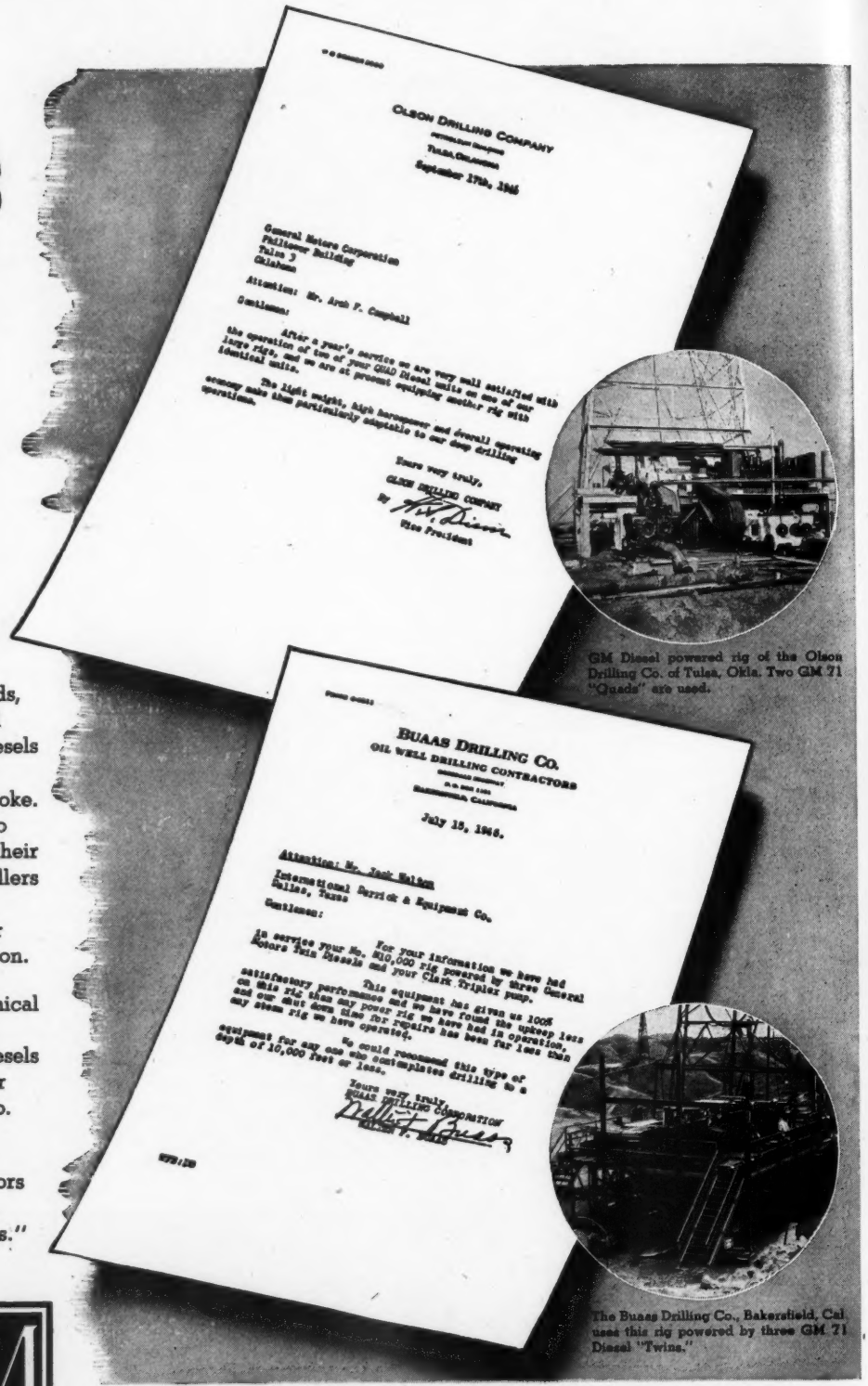
Angus J. Crites being presented with a watch by Harry A. Hopkins at the annual meeting of the I.P.A.A., held at Bakersfield, California.

DRILLING'S A CINCH FOR GM DIESELS

Throughout the oil fields, the trend is to General Motors Diesels. GM Diesels are 2-cycle and give power at every downstroke. They're smooth, easy to start and they pick up their load fast. They give drillers steady, heavy-duty continuous horsepower that can be depended on.

Diesel is clean, economical power that cuts down fire hazard and GM Diesels are compact and easier to move from job to job.

It's no wonder that more and more operators are saying, "We like General Motors Diesels."


OLSON DRILLING COMPANY
Tulsa, Oklahoma
September 17th, 1945
General Motors Corporation
Philtower Building
Tulsa 3
Oklahoma
Attention: Mr. Arch P. Campbell
Gentlemen:
After a year's service we are very well satisfied with the operation of two of your GMAD Diesel units on one of our large rigs, and we are at present equipping another rig with identical units.
The light weight, high horsepower and overall operating economy make them particularly adaptable to our deep drilling operations.
Yours very truly,
OLSON DRILLING COMPANY
By
Vice President
BUAAS DRILLING CO.
OIL WELL DRILLING CONTRACTORS
Bakersfield, California
July 15, 1946.
Attention: Mr. Jack Kalsen
International Derrick & Equipment Co.
Dallas, Texas
Gentlemen:
In service your No. 810,000 rig powered by three General Motors Twin Diesels and your Clark Triplex pump.
For your information we have had
This equipment has given us 100%
satisfactory performance and we have found the upkeep less on this rig than any power rig we have had in operation, and our shut down time for repairs has been far less than any steam rig we have operated.
We could recommend this type of equipment for any one who contemplates drilling to a depth of 10,000 feet or less.
Yours very truly,
BUAAS DRILLING CORPORATION
GM GENERAL MOTORS DIESEL POWER
GM Diesel powered rig of the Olson Drilling Co. of Tulsa, Okla. Two GM 71 "Quads" are used.
The Buaas Drilling Co., Bakersfield, Cal. uses this rig powered by three GM 71 Diesel "Twins."

DETROIT DIESEL ENGINE DIVISION

DETROIT 23, MICH. ● { SINGLE ENGINES . . Up to 200 H.P. / MULTIPLE UNITS . . Up to 800 H.P.

GENERAL MOTORS

GENERAL MOTORS CORPORATION

DIESEL ENGINE SALES, PETROLEUM INDUSTRY, 1504 PHILTOWER BUILDING, TULSA 3, OKLA.

sociation members have called this to our attention many times. More business should supplement this kind of research publicity they declare. On account of the trees so many great Americans have not been able to see the forest.

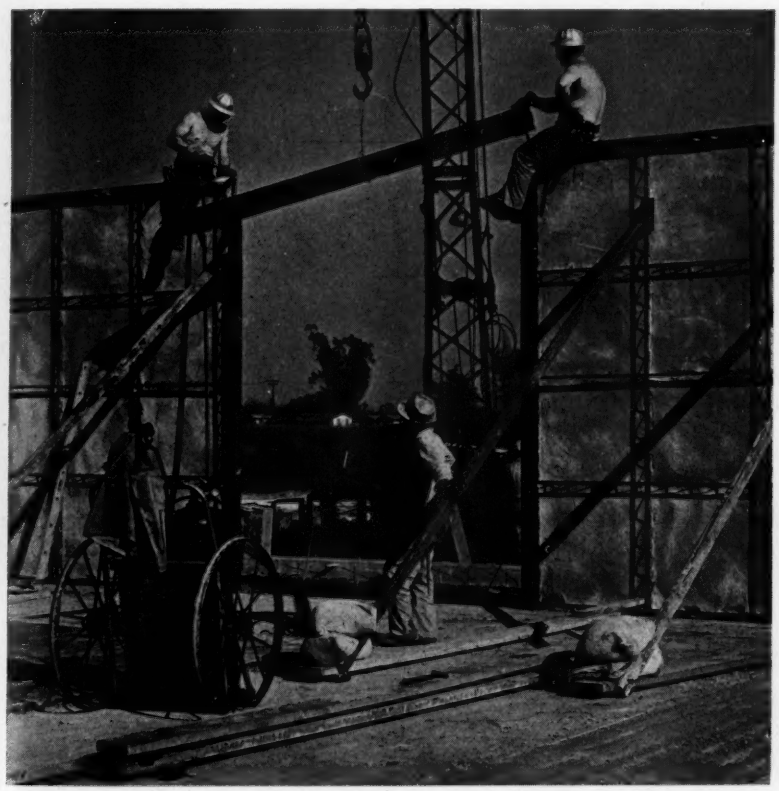
CURLEY EMMONS was over from Taft the other night to help the GeePee employees retire Clara Ryan whom we mentioned in a previous issue of Kern County Oil News in COW. We tried to get Clara's picture and foolishly called her up at the GP office where we learned she had retired from duty.

LUCKIEST PERSON IN KERN this month was Shell Oil's resident manager who with his staff and friends feted Jimmie Doolittle. Manager P. L. Kartzke told us that a Kern County barbecue was held also at Shell Park. With Doolittle now general vice president of Shell Union Corporation, were E. A. Cunningham of San Francisco, former district manager for production, and Jimmy's assistant H. F. Brown.

USES FOR AVIATION IN SHELL'S PROGRAM are defined chiefly as follows: 1. visual inspection of terrain to discover various formations; 2. to photograph any likely looking land structures; 3. to deliver supplies to geological groups in out of way places; and 4. to transport oil cargoes until railroad and other transportation lines can be established.

DOYLE GRAVES of the Amerada Petroleum Company who is heading up the oil scouts for 1947's first half year is doing a swell job according to fellow scoutwigs. He is most certainly serious minded and the possessor of a personality that makes things happen for cooperation and coordination.

FLOYD JOHNSON has just returned from the regular sojourn to Los Angeles. While he was away we called up Herb Mc Masters, his



OIL MAN RE CONVERTS: During war Mc Carthy Tank and Steel of Bakersfield converted to War needs . . . End of war found the firm almost infirm with some oil business left . . . but not enough to shout about. Last year 1946 Bob Mc Carthy no longer depended on the oil industry alone . . . instead he made or fabricated cement walls with re-inforced steel in concrete as shown in the picture. Two warehouses have been constructed from this effort and a regular wholesale warehouse district is now in the making. In addition the oilmen are building necessary accommodations as a result of their expansion, and Mc Carthy serves the industry again.

GM
GENERAL MOTORS
DIESEL POWER

ANDERSON-O'BRIEN COMPANY

GENERAL MOTORS DIESEL ENGINES

Our stock of GM Diesels assures you of the right engine for the job—plus fast delivery.

And, as our customers are learning, our interest does not end with your purchase.

Your investment is guaranteed by our Service Department. This group of Diesel experts get out in the field and make sure that every GM Diesel installation in our territory is properly set up and functioning efficiently.

From Anderson-O'Brien, too, you can look for engineering help in the design of oil field equipment. Recent work along this line has developed special unitized drives within road clearance.

Our Technical Sales Department will be glad to discuss with you any questions which you may have regarding special equipment design or the redesign of existing equipment for more efficient operation.

ANDERSON-O'BRIEN COMPANY

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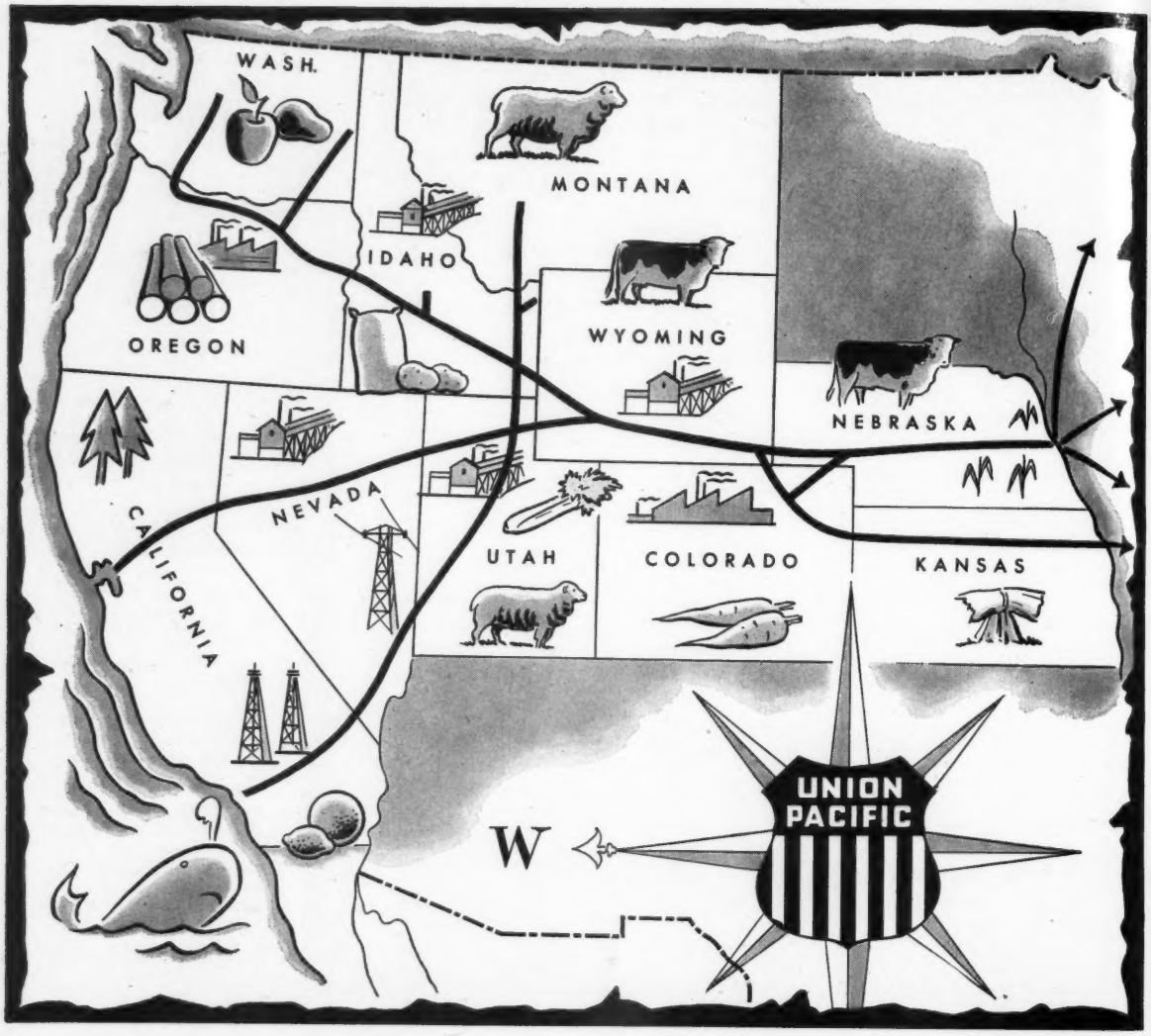

"TREASURE MAP" for OIL SALES

In the "Union Pacific West"... eleven great states... industrial and commercial enterprises, mechanized farm equipment, millions of cars and trucks, offer a vast and fertile market for petroleum products.

It is a constantly growing market, ripe for still greater expansion. Since V-J day, hundreds of factories, warehouses and distribution outlets have located on the Union Pacific right-of-way.

For unexcelled transportation—and for information regarding industrial sites—*be specific... say "Union Pacific."*

★ *Address Industrial Department, Union Pacific Railroad, Omaha 2, Nebraska, for information regarding industrial sites.*

UNION PACIFIC RAILROAD

The Strategic Middle Route

immediate chief, and found him readily cooperative in imparting some of the news about Honolulu. Herb said that Elmo W. Adams, chief geologist for "Hoco" had called a meeting of district facilities and staff for the purpose of taking a "look see" at the 1947 program. **HERB MC MASTERS** incidentally appears to be one person who is not getting any older with his job. We have known him for a long time and we have noticed it.

SOME OF THE OILWIGS up in Kern County in Greater Bakersfield who live on the La Cresta fringe are developing a great civic consciousness. This is a good thing . . . in the old days oilfolks were just here and there temporarily for about 50 years. Evidently we all stopped kidding ourselves after being in the same place with the same firm for a decade or two.

GOLDEN BEAR'S extra luberous lubricants are still in demand and car load after carload is filling daily out at Oildale according to M. B. Pardew the refinery superintendent.

H. D. HOBSON of GeePee didn't get to go to Clara's retiring or tiring out party, but Ward Kelly did and he thinks there were over 200 people present. Pardon us if we mention it again. Walt Goldhammer please copy.

OHIO'S E. H. VALLAT says in effect that some adjustments may be due in prices, but no large overall increase is being predicted.

OWEN JOHNSON of that Valve Company by the same name had his phone taken out. At least that is what the operator told us. We tried to find out why and got some answers all of them practically the same: never home long enough to answer, never home period, when home desired to rest from midnight to daybreak . . . all of which adds up that since he has been doing a little bit of advertising, building valves for farmers and wineries he is in greater demand. **ANOTHER FIRM STEPS TO HELP THE FARMER** so the farmer will help him.

WHICH REMINDS US that farm income for 1946 the year just past, was over $120 millions. This will far exceed the total returns from oil and mining in this county for the second time in a hundred years. This time it looks like agriculture will stay ahead. Details next issue.

CHARLIE PREMO, secretary of the San Joaquin Valley Oil Producers Association knows which side the bread the butter is on. We heard him say to an inquiring soul, "give it to the COW they do a lot of free publicity for us.

Thanx Charlie . . . how about some news.

AND THIS BRINGS us up to **GEORGE HABERFELDE** who is about to re-ad with us. Fred Owen one of the directors or VP's gave up his seat to George at the Angus Crites testimonial dinner. George likes a little brass helmet smoke and gladly accepted. Fred ran all over the place to be sure George would be there and properly escorted . . . never gave any reasons . . . However, at the close of the session when GH thanked Fred for his courtesy . . . Fred said, "that's okey, George . . . and if you really mean it why pick up half the check I'll take up the other part. You can't sell George short and he did it

THE MAN IN THE FIELD
knows the importance of a
Dependable VALVE

SPECIALIZING in
STELLITING of PLUG VALVES
Known for repair and sale of
oil well and refinery valves.
All Work Guaranteed

Johnson VALVE SHOP
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of Bakersfield
Boiler Plants and Insulation Brick and
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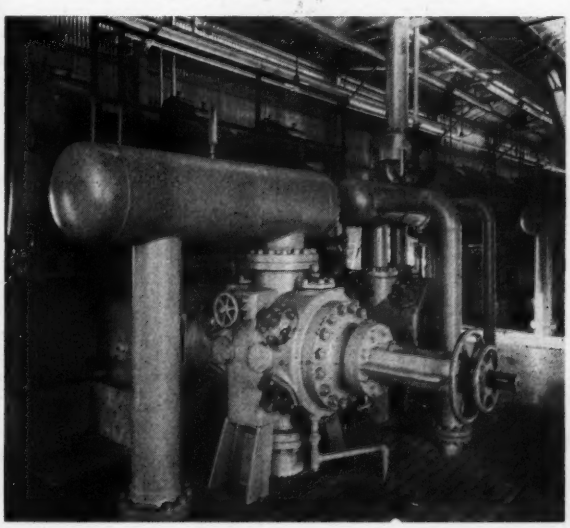
Compressor Plant Construction
Johns-Manville
INDUSTRIAL INSULATION
C. E. MANLEY, Manager
Highway 99, West of Circle — Phone 30750



A hand to Raise on!

Aces all!

The Ⓐ which appears on all Axelson oilfield production equipment, is your assurance that you are obtaining the best in service life, engineering skill and metallurgical research, with over 50 years of time-tested and proven customer satisfaction.

The Axelson line of oil production equipment has been developed with the primary thought of maintaining maximum oil production at sustained minimum cost.

The high quality and durability coupled with the corrosion and fatigue resistance that are marked characteristics of all Axelson products, pay big dividends in any pumping operation.

AXELSON MANUFACTURING CO. PLANTS—6160 So. Boyle Avenue (P. O. Box 98, Vernon Station), Los Angeles 11, Calif. • 3844 Walsh Street, St. Louis 16, Missouri OFFICES—50 Church St., New York City 7 • National Bank of Tulsa Building, Tulsa 1, Okla. Avda Pte. R. Saenz Pena 832, Buenos Aires, Argentina • DISTRIBUTORS—Jones & Laughlin Supply Company • Great Northern Tool & Supply Company • C. C. McDermond, Apartado 331, Maracaibo, Venezuela • Industrial Agencies, Ltd., San Fernando, Trinidad, B.W.I.

AXELSON

PETROLEUM INDUSTRY EQUIPMENT

THERE IS NO ECONOMICAL SUBSTITUTE FOR QUALITY Ⓐ

happily. And so the rumor, trumor goes . . . we only overheard.

AT MIDNIGHT in our newsy corner, reports come in that quicken good feeling. There will not be a strike. Good deal. It takes the old oil worker, the old oilwig and some good old combined horse sense that makes them click as the modern industry of the 20th century, to really show up industry that can't do any better in settling a back-yard argument. Gosh we hope we can keep our crystal working like this all year.

THIS H. B. FELL, FELLOW who spoke at the Bakersfield meeting of the IPAA had something when he said substantially, "with our marvelous network of pipelines we do not need to build up our above ground inventory. Let's hold it down to what they need, and not up to what they want." To continue he said, "when we produce unnecessary oil, we're giving most of it to the government anyway." He thought that production for the USA should not exceed 4,450,000 barrels per day. "We reached 4,600,000 . . . but any beyond this will force us into above ground storage."

CHARLEY MANLEY may have been at the meeting, but we rather doubt it since our roving photographer failed to register his likeness. Oilfield Construction Company, according to Manley knows no season and it may have been that Charley was officer-of-the-night on an insulation job.

BILL KECK OF SUPERIOR used to let his wheels down and land in at the Kern airport We know about the 1947 weather but even so his planes should not mind instrumenting in. Last time we saw Bill Jr. he was in an apparel shop trying to get his size . . . after all he spends enough here to afford a little city shopping.

WE SPOKE TOO SOON because another train wreck of major nature took place outside of Kern this time, but in the San Joaquin Valley. This time it was really oil . . . oil from the truck tanker that got in the way of So. Pac's SJ Daylight at Kingsburg. Five perished finally but the truck driver escaped which was what the engineer and fireman plus three others did not do . . . say nothing of the burned or injured scores.

CONSOLIDATED STEEL here is about the busiest place in the Valley . . . Could be that they are helping H/O in Los Angeles ready up that big inch which the H/O (Home office) is building for natural gas from Texas.

SMOO HARPER of the local Consolidated told a friend of ours once, that building an industry or a bank (he is a director on one of the local ones) was not nearly as difficult or perhaps as important, as sustaining it, maintaining it and showing increasing returns to take care of contingencies.

WELL HE SHOULD never have said that, because it reminds us of space. Which also reminds us that one of the most effective ways to firm up the economic constancy is a **planned advertising campaign.**

REALLY I DON'T KNOW where we got it . . . some kind of a convention in Florida or someplace like that . . . anyway figures show that when industry retrenched dur-

Trouble

doesn't punch a clock!

ANY TIME you have a fish in the hole, Remember–Bowen fishing experts are ready to help you...24 hours a day.

A complete stock of Bowen Tools is kept at EACH of six strategically located service stores, covering all active California fields. No waiting for equipment to be brought from a distance. You can count on this quick and dependable fishing tool service when you need it.

DAY OR NIGHT... Call BOWEN

Santa Fe Springs	Whittier 436-36
Huntington Beach	206
Ventura	6435
Bakersfield	302H8
Avenal	256
Santa Maria	710R

BOWEN FISHING TOOL CO.

Just Say---

YES! You may send me the CALIFORNIA OIL WORLD for one year, for which I enclose $1.00.

Name .....

Address .....

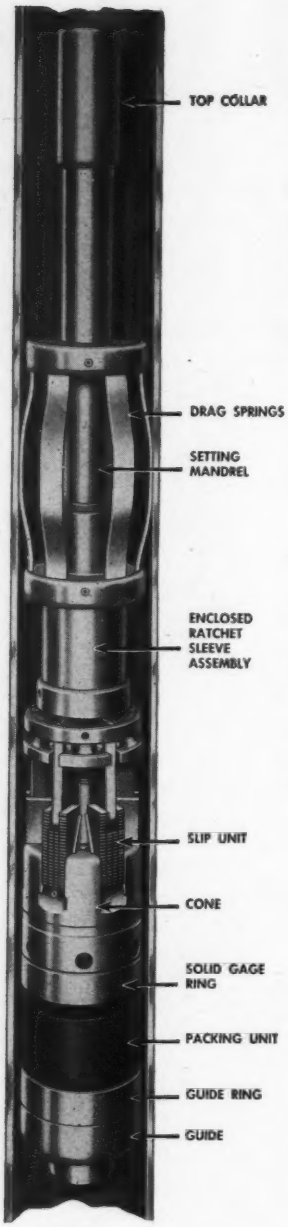
City ..... State .....

Position ..... Company .....

Check branch engaged in Producing..... Refining..... Natural Gasoline .... Marketing..... Manufacturing....

Subscriptions accepted only from persons actively connected with the oil industry.

California Oil World, 117 West 9th St., Los Angeles 15, Calif.



THE BAKER MODEL "RT" RETRIEVABLE CEMENTER is a safe, positive "Hold Down Type" Packer primarily used:

(a) for placing cement slurry, plastic, acid, or any other fluid, behind the casing or liner through perforations (or other openings) or in open hole below the shoe, at any necessary pressure;

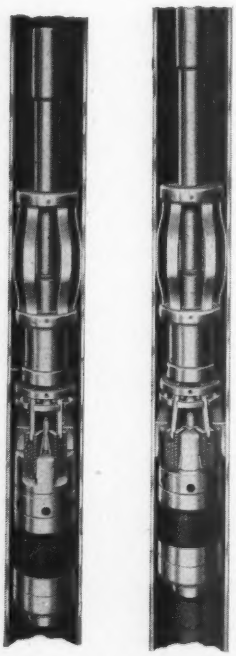
(b) for testing casing or locating holes in pipe;

(c) for pressure-testing effectiveness of a previously performed cement job;

(d) to set in lime formations for acidizing and/or squeeze cementing.

The tool is operated mechanically and is not dependent upon fluid pressure to set or release. It functions successfully in high-pressure wells, where it will withstand, with a good margin of safety, any pressure that can be imposed safely upon the well casing. It can be used with equal efficiency and safety in low-pressure or low fluid level wells.

Complete details on the Baker Model "RT" Retrievable Cementer (Product No. 411-RT) are available from any Baker representative.



In running-in position | In expanded position

MANY ADVANTAGES

1. May be set and released at any place in the casing—as many times as desired—without removal from the well.

2. Can be run-in at a fast rate of speed—an advantage not possible when a cementer is equipped with swab cups, or is set by hydraulic action.

3. Tubing or drill pipe will not flow over while tool is being lowered in the hole with reasonable speed.

4. Circulation is possible completely around the tool which permits reverse circulation or circulating the long way.

5. The tool can be run-in immediately after a drill stem test; the mud conditioned; and a squeeze job performed, all in one run.

6. Fluid can be by-passed ahead of the cement slurry, plastic or acid by means of the Circulation Joint positioned immediately above the Cementer.

7. Testing the casing or protecting the casing after a squeeze job is possible by applying a reasonable pressure to the annulus after the Cementer is set.

8. The Baker Model "RT" Retrievable Cementer will withstand any pressure that is safe for the well equipment.

9. If the packing assembly should stick, or be cemented in the hole, it usually is possible to remove the *entire* Cementer; or, in extreme cases, all parts except drillable materials can be removed.

10. A drillable tail pipe, of any reasonable length, may be run below the Cementer, if well conditions demand it.

BAKER OIL TOOLS

BAKER OIL TOOLS, INC., LOS ANGELES • HOUSTON • NEW YORK

ing the depression years by reducing the cost of doing business (advertising) that volume lost its wings right now. Since 1932 business has learned that the **cost** of **doing** business regulates the income from sales. Increasing sales and business is developed through advertising . . . regardless of times.

WEDDING BELLS have not rung this month for very many oil folks. However, Marie Anderson of the Standard did accept Attorney Glenn Bultman of Dorsey, Campbell and Bultman in certain overheard vows this month. The story of wedding bells for Standard's Gene Kinser and Helen Schmicklee is waiting pictures. If anyone sees this that knows Marie and Glenn, Helen and Gene please copy . . . also. When he the writer got hitched no trade magazine ran after him for a mug shot.

UNION PACIFIC'S San Joaquin Valley representative was here last month, and **called** attention to the potato facts that favor Kern's future in shipping with Union Pacific . . . specific . . . ally.

MC CARTHY TANK converted to war, reconverted to peace and had to supplement its operation with new things until oil needs come beak. It used to make derricks, trusses . . .still does . . . including tanks of all kinds. But in getting the San Joaquin Agency for "Latistell" structures they did a job that has been the attention of the NAM who visited the place this month. Bob Mc Carthy is one person who believes in firming up his success by proper followthrough with advertising. So Ralph Ryan has been engaged for that purpose. Ralph's efforts have already brought MT & SCO before the national lime light. Congratulations.

WAX -

FINE IN CANDLES
A HEADACHE IN OIL LINES

Nobs Wax Solvent will dissolve and remove the most persistent waxes and paraffines from wells lines and traps.

NOBS DEHYDRATING CORPORATION
2465 East 53rd Street, Los Angeles 11, California

MC KEE ELECTRIC makes Lok-Cinch hose bands and does a nice nationally advertisedly known business. Mc Kee is one of four nationally known manufacturers in Kern County all having started from scratch because necessity is the mother of invention. Serving the oilfields first 25,000 bands leave here for all parts of the world . . . every month. NAM will tour here too very shortly.

JOHN S. GORDON of Standard Oil . . . here in Kern County . . . top man for SocoCal . . . and tops from a public relations view point . . . is about to have an assistant . . . and will have by month's end. Dick Whitaker was telling us about it, but said that it was not quite ready for announcement . . . someone from Arizona . . . so just as soon as we get his photograph and the nod from J. S. (Jack or Dick) we'll let folks know. By the way never use Gordon's middle initial if you are friendly enough to call him or write him as Jack. He is as sensitive about this as the War Assets agency is about crossing their "t"s or adding them.

RICHARD PHILBIN of the Mayfair Hotel, Los Angeles informs your scribe that so many oilmen stop with him lately the past war and postwar years that he feels like taking part in the program up here. Welcome to our County especially the Kern County Oil News Section of this department.

SMITH - EMERY CO.
Since 1904
Oils Tested
Shipments Certified
Tanks Strapped
Offices and Laboratories
920 Santee St. Los Angeles
651 Howard St. San Francisco

Wilson Bros.
PAINT ENGINEERS
CONTRACTORS
WHITTIER 43-275

FOR SALE

Two 125 h. p. 250# working pressure Broderick boilers Herley-Kelly, 3201 Pasadena Ave., Long Beach 7, Calif. Phone Long Beach 425-23. tf

FOR SALE—TANK FARM

2 acre tank farm, 4 miles from Long Beach, with 9 tanks; total capacity 14,750 bbls.; has 2 truck loading racks and loading rack on Southern Pacific spur. Price $13,000. Dutch Bandringa, Broker, 741 Compton Blvd., Clearwater, telephone MEtcalf 3-2910. tf

WANTED

Wanted for window display purposes, miniature oil derrick. Also want 16 mm color film of any oil gushers or other exciting scenes.
Capital Securities Co.
2038 Broadway
Oakland 12, Calif. 2/20b

CALL FOR BIDS. To sell royalty crude oil accruing to the United States. Sealed proposals, in duplicate, will be received in the office of the Director of the Geological Survey, Room 5244 Federal Works Agency Building, Washington 25, D. C., on or before noon, March 4, 1947, for the sale of royalty crude oil accruing to the United States from Federal lands in the Aliso Canyon field, the Oak Canyon field, the Buena Vista Hills field (outside Naval Petroleum Reserve No. 2), The Jacalitos Hills field, and the Santiago field, all in California. No bid received after the time fixed for submitting bids will be considered. Contracts for the royalty oil will be for a term of 3 years beginning the first of the calendar month following execution by the Secretary of the Interior. The monthly royalty oil accruals now offered for sale amount to about 700 barrels from the Aliso Canyon field; 6,600 barrels from the Oak Canyon field; 4,900 barrels from the Buena Vista Hills field; 5,400 barrels from the Jacalitos Hills field, about 9,200 from the Santiago field. Specifications on the quantities of crude oil offered for sale, the form of bids, the form of contract, and the conditions with respect to bond requirements, deliveries, volume measurements, gravity determinations, and other details relative to the call for bids may be obtained by bidders from the Director, Geological Survey, Department of the Interior, Washington 25, D. C., or the Oil and Gas Supervisor, U. S. Geological Survey, 533 U. S. Post Office anad Courthouse Building, Los Angeles 12, California. Sealed bids must be submitted to the Director of the Geological Survey, Department of the Interior, Washington 25, D. C., pursuant to the specifications, the envelope to be marked plainly "Bid on California Royalty Oil, not to be opened before noon March 4, 1947." C. Girard Davidson, Assistant Secretary of the Interior. 2/5b

California Oil World's Monthly Summary

DEVELOPMENT—PRODUCTION—SUPPLY & DEMAND
PACIFIC COAST TERRITORY

TABLE I—CALIFORNIA DEVELOPMENT—PRODUCTION

	DECEMBER, 1946 DEVELOPMENT				PRODUCTION	
	Active Drilling Wells	Oil Wells Completed	Initial Production B/D	Oil Wells Completed Year 1946	Daily Average Dec. 1946	Daily Average Dec. 1945
SAN JOAQUIN VALLEY						
Ant Hill	1	2	352	14	1,540	1,060
Antelope Hills	.....	.....	.....	.....	1,482	1,727
Arvin	.....	.....	.....	.....	20	35
Bellevue	.....	.....	.....	.....	278	436
Belridge—North	.....	.....	.....	.....	5,041	5,561
Belridge—South	3	1	12	83	10,237	10,745
Blackwell's Corner	1	.....	.....	7	286	200
Buena Vista Hills	2	1	37	22	46,240	39,923
Burrel	.....	.....	.....	.....	12	15
Canal	.....	.....	.....	.....	1,973	2,792
Canfield-Gosford	.....	.....	.....	.....	72	125
Canfield Ranch	.....	.....	.....	.....	28	33
Coalinga—East	1	.....	.....	14	16,560	18,516
Coalinga—Nose	1	1	241	3	57,661	52,847
Coalinga—West	.....	.....	.....	3	6,604	7,089
Coles Levee—North	3	.....	.....	8	16,155	22,261
Coles Levee—South	1	.....	.....	1	2,267	2,308
Cymric	4	8	1,135	108	12,067	.....
Edison	4	.....	.....	72	14,720	10,860
Elk Hills	6	.....	.....	16	6,957	14,320
Fruitvale	.....	.....	.....	.....	7,217	8,109
Greeley	.....	.....	.....	4	10,528	10,407
Helm	1	.....	.....	23	4,267	4,267
Jacalitos	1	2	545	12	4,064	4,110
Kern Front	5	4	506	34	12,144	12,110
Kern River	2	.....	.....	19	9,570	9,471
Kettleman North Dome	6	1	1,970	19	36,116	38,027
Lanare	1	1	193	18	2,421	1,294
Lost Hills	2	9	435	41	3,918	3,474
McClung	.....	.....	.....	.....	9	36
McKittrick	.....	.....	.....	8	4,658	7,768
Midway-Sunset	3	3	722	23	36,108	37,425
Mountain View	4	2	1,580	19	4,786	2,718
Mount Poso	.....	.....	.....	14	15,202	17,548
Paloma	11	1	698	20	7,327	4,844
Pleasant Valley	1	.....	.....	2	3,517	3,638
Pyramid Hills	.....	.....	.....	1	289	339
Race Track	.....	3	828	14	1,926	1,011
Raisin City	.....	.....	.....	5	2,846	2,702
Rio Bravo	.....	.....	.....	.....	13,187	13,402
Riverdale	.....	1	223	8	4,168	3,337
Rosedale Ranch	.....	.....	.....	.....	123	169
Round Mountain	1	3	207	12	8,847	9,400
Salt Creek	2	4	1,092	18	2,712	.....
Santiago	.....	1	782	23	6,780	1,267
Sheep Springs	.....	.....	.....	3	312	582
Strand—East	.....	.....	.....	.....	503	596
Strand—West	.....	.....	.....	.....	1,495	1,695
Tejon	1	1	218	38	2,305	469
Ten Section	1	.....	.....	.....	8,124	8,646
Union Avenue	.....	.....	.....	.....	389	170
Wasco	.....	.....	.....	.....	486	981
Wheeler Ridge	.....	.....	.....	.....	225	215
Miscellaneous	3	1	20	5	132	48
TOTAL SAN JOAQUIN VALLEY	72	50	11,796	734	418,941	401,128
COASTAL AREA						
Aliso Canyon	2	.....	.....	8	3,128	3,016
Capitan	.....	.....	.....	6	3,309	3,124
Del Valle	1	.....	.....	3	4,783	5,715
Elwood	1	.....	.....	7	6,886	5,912
Gato Ridge	1	1	154	5	3,780	4,056
Hasley Canyon	.....	.....	.....	.....	.....	.....
Newhall-Potrero	2	.....	.....	9	6,038	5,869
Oak Canyon	.....	.....	.....	1	1,497	1,878
Oxnard	.....	.....	.....	1	498	905
Padre Canyon	2	1	648	3	2,475	2,482
Ramona	4	2	402	28	2,502	466
Rincon	.....	.....	.....	.....	4,175	4,923
San Miguelito	2	2	525	9	5,353	4,825
Santa Barbara	.....	.....	.....	.....	62	93

MONTHLY SUMMARY—Continued	DECEMBER, 1946 DEVELOPMENT				PRODUCTION	
	Active Drilling Wells	Oil Wells Completed	Initial Production B/D	Oil Wells Completed Year 1946	Daily Average Dec. 1946	Daily Average Dec. 1945
Santa Maria	10	10	1,840	42	15,345	12,950
Santa Maria Valley	2	2	228	46	30,068	33,985
Summerland	.....	.....	.....	.....	3	.....
Ventura Avenue	8	2	958	38	46,313	46,395
Ventura-Newhall	5	2	774	29	7,393	6,425
Watsonville	.....	.....	.....	.....	.....	25
Zaca Creek	.....	.....	.....	.....	439	256
TOTAL COASTAL BASIN	40	22	5,529	235	144,047	143,300
LOS ANGELES BASIN						
Alondra	2	.....	.....	1	540	.....
Brea-Olinda	5	1	122	9	11,263	10,675
Buena Park	.....	.....	.....	2	62	108
Coyote—East	2	.....	.....	9	4,663	4,890
Coyote—West	2	1	43	11	15,037	15,660
Dominguez	4	1	516	10	14,909	17,214
East Los Angeles	1	.....	4	.....	640	.....
El Segundo	.....	.....	.....	1	567	677
Huntington Beach	5	6	1,597	52	47,356	46,420
Hyperion	.....	.....	.....	.....	103	.....
Inglewood	.....	.....	.....	.....	12,136	14,022
La Mirada	1	.....	.....	1	6	.....
Lawndale	.....	.....	.....	.....	19	16
Leffingwell	.....	.....	1	.....	43	.....
Long Beach	.....	.....	.....	1	23,977	26,180
Los Angeles-Salt Lake	.....	.....	.....	.....	393	469
Montebello	1	.....	.....	2	7,872	9,392
Newport-Costa Mesa	3	6	845	70	7,309	2,404
Playa Del Rey	.....	.....	.....	.....	2,245	2,215
Potrero	.....	.....	.....	2	671	1,179
Richfield	3	.....	.....	6	6,997	7,493
Rosecrans	.....	.....	.....	3	4,866	5,364
Sansinena	.....	.....	.....	.....	69	102
Santa Fe Springs	.....	.....	.....	.....	16,538	16,734
Seal Beach	2	.....	.....	18	10,634	9,338
Torrance	.....	2	95	20	8,392	8,947
Turnbull Canyon	.....	.....	.....	.....	111	154
Whittier	.....	.....	.....	.....	991	980
Wilmington	16	12	7,671	183	117,854	96,444
Yorba Linda	.....	.....	.....	.....	.....	99
TOTAL LOS ANGELES BASIN	47	29	10,889	406	316,263	297,176
EXPLORATORY						
Outpost Wells	29	.....	.....	.....	.....	.....
Wildcats	17	.....	.....	.....	.....	.....
Gas Wells	4	4	.....	65	.....	.....
TOTAL CALIFORNIA	209	105	28,214	1,790*	879,251	841,604

*—Includes gas wells completed and 350 wells abandoned.

TABLE II—SUPPLY AND DEMAND FOR PETROLEUM PRODUCTS PACIFIC COAST TERRITORY

DATA FOR DECEMBER OF EACH YEAR

	Dec. 1941	Dec. 1942	Dec. 1943	Dec. 1944	Dec. 1945	Dec. 1946
RAW MATERIAL—B/D						
1. Crude Oil Produced—California	631,930	773,850	792,508	885,234	841,604	879,251
2. Crude Oil from outside 5 Western States	2,005	3,570	4,879	4,508	3,396	4,774
3. Natural Gasoline Produced	38,000	37,000	38,000	41,000	40,000	41,000
SUPPLY OF FINISHED PRODUCTS ALL SOURCES—B/D						
4. Natural Gas., L.P.G. and Condensate	21,903	9,193	11,129	11,839	16,903	24,161
5. Gasoline and Naphtha Distillates	236,903	257,645	294,839	343,484	301,581	314,871
6. Kerosene and Kerosene Distillates	(3,742)	6,903	10,967	9,484	11,806	7,548
7. Lubricating Oils, etc.	11,871	11,645	11,613	13,290	14,388	19,226
8. Gas Oil and Diesel Oil	59,613	70,580	65,193	67,451	77,162	138,968
9. Fuel Oil Residuum	287,967	369,097	426,452	478,581	403,968	379,774
10. Asphalt and Road Oils	17,000	35,806	16,839	23,677	12,226	18,161
11. Coke and Other Finished Products	3,677	1,032	1,033	3,226	2,839	6,484
12. Other Unfinished Oils	(4,387)	(14,258)	(2,129)	(5,968)	(5,613)	(3,935)
13. Refinery Shortage and Gas	23,518	28,614	35,903	45,129	36,611	29,969
14. Crude Oil (Net)	**30,192**	**53,452**	**(12,032)**	**(18,484)**	**40,678**	**38,581**
15. TOTAL SUPPLY	684,515	829,709	859,807	971,709	912,549	973,808
16. TOTAL DEMAND	669,098	803,646	1,021,613	1,093,129	969,290	993,034
17. DIFFERENCE	15,417	26,063	(161,806)	(121,420)	56,741	(19,226)
18. Stocks on hand End of each month (Total Bbls.)	141,677,000	129,981,000	102,597,000	88,981,000	74,812,000	90,333,000

Martin-Decker Vapor Proof Adjustable Light Fixture for Instrument Panels

Martin-Decker Corporation, Long Beach, California, has placed on the market an adjustable Vapor Proof and Moisture Proof lamp for use on drilling control instruments. Extremely rugged and easily adjusted the fixture provides maximum oilfield usefulness and service. It has been tested by the Underwriter's Laboratory and bears their seal of approval. Made of die cast aluminum with pyrex glass tubing and 15 watt lamp set in a cork gasket, it comes equipped with 20 feet of approved 3 cable cord and cord cap. (The male plug is not vapor proof.) The lamp is extremely compact, being only 5½" long and 2¾" in diameter. A flexible rubber bracket is provided for mounting the fixture on a gauge ring or panel.

For further information, write the Martin-Decker Corporation, 3431 Cherry Avenue, Long Beach 7, California.

Petro-Tech Service Company Organized

Russell Keener and Keith Miner, former Lane-Wells Company employees have organized Petro-Tech Service Company to provide gun perforating and allied services to operators in the Western Venezuela producing oil fields. They will also represent several oil tool manufacturers. Keener, former purchasing agent and Miner, formerly California Division Sales Manager and prior to that, California Operating Superintendent, will maintain headquarters in Maracaibo. Petro-Tech Service Company has purchased two Lane-Wells gun perforating units. Both men are experienced in the sales and operation of gun perforating and other equipment.

National Issues New Bulletin

A new bulletin describing The National Supply Company's Ideal Type R-3 Swivel for rotary drilling rigs includes a life expectancy chart for the main bearing. This chart is based on a rating of 200 tons at 150 rpm. The eight page bulletin carries nine explosion photographs, a blueprint, complete specifications and a detailed description of its construction. A patented feature of the swivel is the wash pipe packing assembly that insures a positive pressure packed seal that can be removed by one man without disturbing the gooseneck or hose connection. The bulletin No. 343, can be obtained by writing The National Supply Company, P. O. Box 899A, Toledo 1, Ohio.

Wilson Introduces New Elevator Links

Web Wilson Oil Tools, Huntington Park, California announces new elevator links which are said to provide the maximum in drilling efficiency and economy. Designed for maximum strength and longer life, the new Web Wilson links are available with bent or straight upper and lower eyes. Wire line handles are optional.

The new Web Wilson elevator links incorporate the finest in high-hardenability alloy steel, are heat-treated to right requirements in modern vertical furnaces, checked 100% for hardness and dimensional requirements and magnafluxed to assure highest quality. Literature is available on request.

Petroleum Equipment Suppliers Association Meet May 4th to 7th

The Petroleum Equipment Suppliers Association will hold its national membership meeting May 4 to 7, inclusive, at the Mark Hopkins Hotel, San Francisco, it is announced by H. H. Glen, President of the Association.

An interesting program is being prepared by a special committee, which promises to make the meeting one of the most important in the history of the Association. Large delegations are expected from the Eastern, Mid-Continent and Southwestern Districts, as well as from the Pacific District.

Entertainment of a unique nature is being planned by the Pacific District members of the Association, who will be hosts to members from other districts.

Further details of the meeting will be announced at a later date.